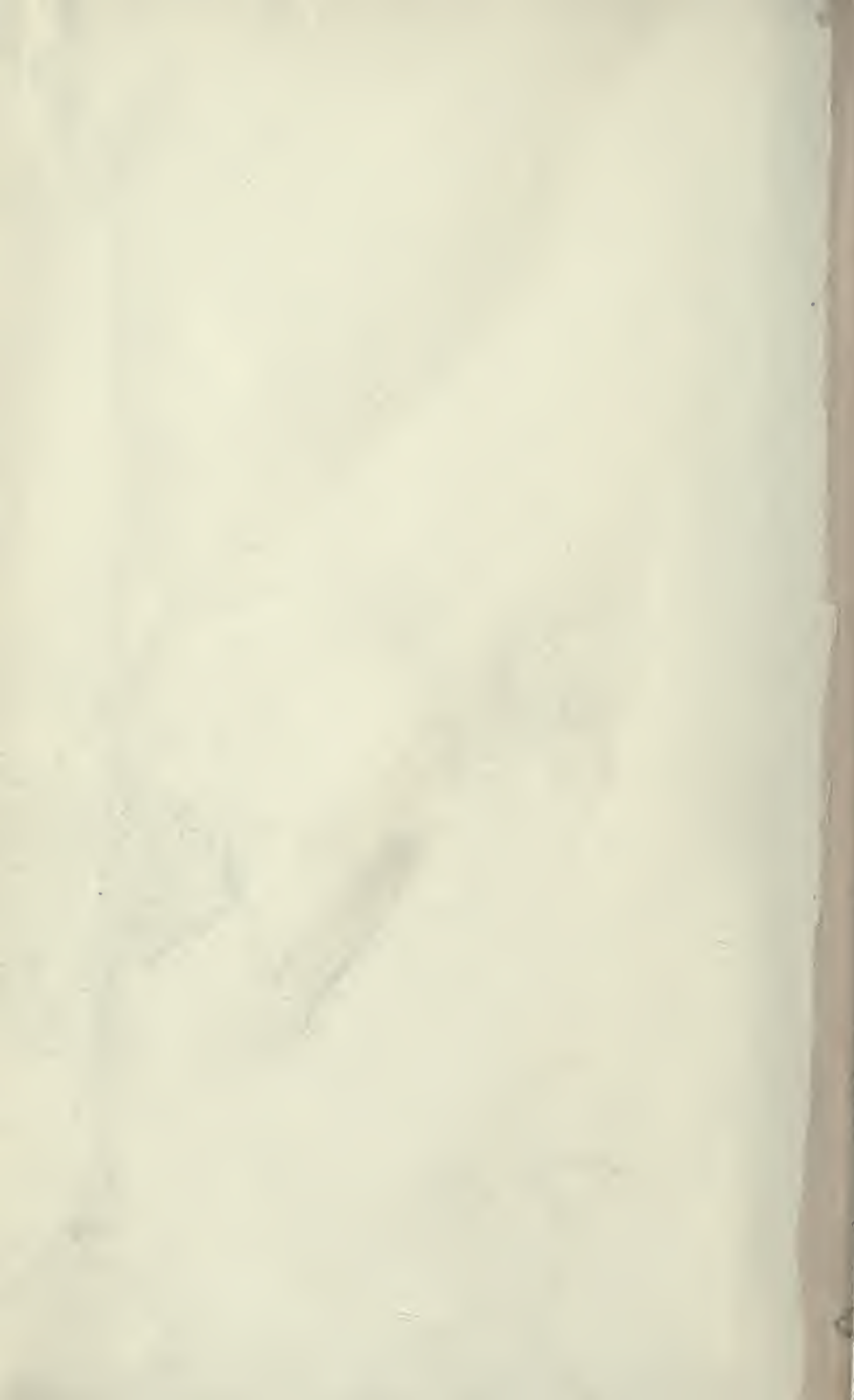




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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

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A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

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A QUARTERLY REVIEW

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PSYCHOLOGY AND PHILOSOPHY.



I.—CAN THERE BE A NATURAL SCIENCE OF MAN?

I.

THERE were two elements in the system of popular ethics inherited from the last century, which were long thought incompatible with its complete reduction to the form of a physical science. These were the doctrines of free-will and of a moral sense. Each, however, was understood in a way which suggested to the naturalist a ready explanation of its supposed claim to lie beyond his sphere. The moral sense, according to the accepted view, was a specific susceptibility to pleasure or pain in the contemplation of certain acts. What was the quality in the acts which excited this pleasure or pain in the contemplation of them? If it were something in the conception of which any originaive function of the reason was implied, then the existence of the moral sense would have meant that there was a determining agent in the inner life of man, of which no natural history could be given. But those writers who had made most of the moral sense had been very indefinite in their account of the quality in action to which it was relative. The most consistent theory on the subject was Hume's. According to him the pleasure of moral sense is pleasure felt in the "mere survey" of an act, independently of any consequences of the act to the person contemplating it, and that which occasions this pleasure

is the tendency of the act to bring pleasure to the agent himself or to others.¹ Moral sense, in short, is a social sentiment either of satisfaction in the view of such conduct as has been generally found to increase the pleasure or diminish the pain of others, or of uneasiness in the reverse, quite apart from any expectation of personal advantage or loss. It is thus properly not by the action of the person feeling it but by that of others that it is excited. An act of a man's own, necessarily proceeding, according to Hume, from some desire for pleasure which it satisfies or fails to satisfy, must have personal consequences for him, incompatible with that disinterested survey which alone yields the pleasure or pain of moral sense, properly so called. Sympathy, however, with the effect which he knows that his act produces on the moral sense of others, may modify the feeling which it causes to the doer of it. An act, in gratification of some passion, which he would otherwise look forward to as pleasant, may become so painful in anticipation from sympathy with the general uneasiness which he knows would arise upon the contemplation of it that, without any fear of punishment, he abstains from doing it.

Thus moral sense and sympathy jointly, as understood by Hume, serve plausibly to explain the office ordinarily ascribed to conscience, as the judge and possible controller in each man of his own acts. At the same time the lines are indicated along which a physical theory of "conscience" might be logically attempted. The problem which Hume bequeathed to a successor who adopted his principles was mainly to account for the two-fold fact, that the mere survey of actions as tending to produce pleasures, in which the contemplator will have no share, is yet a source of pleasure to him; and that among the pleasures taken into account in that estimate of the tendency of an action which determines the moral sentiment are such as have no direct connexion with the satisfaction of animal wants. A theory, which will account for this, will also account for the affection of the agent by sympathy with the sentiment which the contemplation of his action excites in others. Can we find any scientific warrant for believing in a process by which, out of susceptibility to pleasures incidental to the merely animal life, have grown those capacities for enjoyment which we consider essential to general well-being, and those social interests which not only make the contemplation of general well-being an independent source of pleasure, but also make the pleasure of exciting this pleasure—the pleasure of satisfying the moral sentiment of others—an object of desire so strong as in many cases to determine action? If we can, it would seem that we

¹ *Treatise on Human Nature*, Book III., Pt. i., §§. 1, 2, and Pt. iii. §. i.

have given to our national system of ethics—the ethics of moral sentiment—the solid foundation of a natural science.

It is no wonder, therefore, that the evolutionists of our day should claim to have given a wholly new character to ethical inquiries. In Hume's time a philosopher who denied the innateness of the moral sentiments, and held that they must have a natural history, had only the limits of the individual life within which to trace this history. These limits did not give room enough for even a plausible derivation of moral interests from animal wants. It is otherwise when the history may be supposed to range over an indefinite number of generations. The doctrine of hereditary transmission, it is held, explains to us how susceptibilities of pleasure and pain, of desire and aversion, of hope and fear, may be handed down with gradually accumulated modifications which in time attain the full measure of the difference between the moral man and the greater ape. Through long ages of interaction between the human organism and the social medium in which it lives, there has been developed that "sensibility of principle which feels a stain like a wound"; that faculty of moral intuition which not only pronounces unerringly on the social tendencies of the commoner forms of human action, but enables us in some measure to see ourselves as others see us; that civil spirit through which the promptings of personal passion are controlled even in the individual by the larger vision and calmer interest of society. Thus it would seem that for the barren speculation of the old metaphysical ethics we should seek a substitute in a scientific "*Cultur-geschichte*"; in a natural history of man conducted on the same method as an inquiry into any other form of life which cannot be reduced to the operation of strictly mechanical laws. For the later stages of this history we have, of course, abundant materials in the actual monuments of human culture—linguistic, literary, and legal—and these, the physiologist may say, have yet to be considered in connexion with the data which his own science furnishes. It is true that, however far they carry us back, however great the variations of moral sentiment to which they testify, they do not bring us to a state of things in which the essential conditions of that sentiment were absent. The most primitive man they exhibit to us is already conscious of his own good as conditioned by that of others, already capable of recognising an obligation. But the theory of descent and evolution opens up a vista of possibilities beyond the facts, so far ascertained, of human history, and suggests an inquiry into the antecedents of the moralised man based on other data than the records which he has left of himself. Such inquiry, it is thought, will in time give us the means of reducing the moral

susceptibilities of man to the rank of ordinary physical facts, parts of one system, and intelligible by the same methods, with all the natural phenomena which we are learning to know. Man will then have his ascertained place in nature, as perhaps the noblest of the animals but an animal still.

When the moral sentiment has been explained on the principles of natural science, free-will is not likely to be regarded as presenting any serious obstacle to the same mode of treatment. By those of our national philosophers who have asserted its existence, it has generally been understood as a faculty of determining action apart from determination by motives; as a power, distinct alike from reason and from desire, which chooses between motives without being itself dependent on any motive. So crude a notion must long ago have given way before the questions of science, if there had not been a practical conviction behind it which it failed fairly to interpret. What after all, it is asked, is any faculty but an hypostatised abstraction? A faculty is no more than a possibility. Whatever happens implies no doubt a possibility of its happening. Voluntary action implies a possibility of voluntary action, just as the motion of a billiard-ball implies a possibility of that motion, but the possibility in each is determined by definite conditions. In the case of the billiard-ball these conditions, or some of them, are so obvious that we do not think of treating the possibility of the ball's moving as a faculty inherent in the ball, and of ascribing the ball's motion to this faculty as its cause: although, as we know, when the causes of a motion are less apparent the uninstructed are quite ready to ascribe it to a faculty or power in the moving body. In ascribing any voluntary action to a faculty in man we are doing, it is said, just the same as in ascribing any particular motion to a faculty in the moving body. The fact is the particular voluntary action, which must be possible, no doubt, or it would not be done, but of which the real possibility consists in the assemblage of conditions which make up its cause. To include any 'faculty' of action among these is merely to express our ignorance of what they are or our unwillingness to examine them. Among them, it is true, is the wish which happens to be predominant in the agent at the moment of action; but this, too, has its definite conditions in the circumstances of the case and the motives operating on the agent. It may be owing to the character of the agent that one of these motives gets the upper hand, but his character again is only a name for an assemblage of conditions, of which it may be scarcely possible for us completely to trace the antecedents, but which we are not on that account justified in assigning to a cause that is no cause, but merely a verbal sub-

stantiation of the abstraction of our ignorance. Human freedom must be understood in some different sense from that with which our anthropologists are familiar, if it is to stand in the way of the scientific impulse to naturalise the moral man.

We will suppose then that a theory has been formed which professes to explain, on the method of a natural history conducted according to the principle of evolution, the process by which the human animal has come, according to the terminology in vogue, to exhibit the phenomena of a moral life—to have a conscience, to feel remorse, to pursue ideals, to be capable of education through appeals to the sense of honour and of shame, to be conscious of antagonism between the common and private good, and even sometimes to prefer the former. It has generally been expected of a moralist, however, that he should explain not only how men do act, but how they should act: and as a matter of fact we find that those who regard the process of man's natural development most strictly as a merely natural one are as forward as any to propound rules of living to which they conceive that, according to their view of the influences which make him what he is, man *ought* to conform. The natural science of man is to them the basis of a practical art. They seek to discover what are the laws—the modes of operation of natural forces—under which we have come to be what we are, in order that they may counsel us how to seek our happiness by living according to those laws. Now it is obvious that to a being who is simply a result of natural forces an injunction to conform to their laws is unmeaning. It implies that there is something in him independent of those forces, which may determine the relation in which he shall stand to them. A philosopher, then, who would reconstruct our ethical systems in conformity with the doctrines of evolution and descent, if he would be consistent, must deal less scrupulously with them than perhaps any one has yet been found to do. If he has the courage of his principles, having reduced the speculative part of them to a natural science, he must abolish the practical or preceptive part altogether. Instead, for instance, of telling men of a greatest sum of pleasures which they ought to seek, and which by acting in the light of a true insight into natural laws they may attain, he will content himself with ascertaining, so far as he can, whether such and such a temperament under such and such circumstances yields more frequent, durable, and intense pleasures than such another temperament under such other circumstances. He will not mock the misery of him who fails, nor flatter the self-complacency of him who prospers, by speaking of a happiness that is to be obtained by conformity to the laws of nature, when he knows that, according to his own prin-

ciples, it is a struggle for existence determined by those laws which has brought the one to his wretchedness and the other to his contentment. He will rather set himself to show how the phraseology of 'ought' and 'ought not,' the belief in a good attainable by all, the consciousness of something that should be though it is not, may according to his philosophy be accounted for. Nor, if he has persuaded himself that the human consciousness, as it is, can be physically accounted for, will he find any further difficulty in so explaining that language of moral injunction which forms so large an element in its expression. He will probably trace it to the joint action of two factors—to the habit of submission to the commands of a physical or political superior, surviving the commands themselves and the memory of them, combined with that constant though ineffectual wish for a condition of life other than his own, which is natural to a being who looks before and after over perpetual alternations of pleasure and pain.

The elimination of ethics, then, as a system of precepts, involves no intrinsic difficulties other than those involved in the admission of a natural science that can account for the moralisation of man. The discovery, however, that our assertions of moral obligation are merely the expression of an ineffectual wish to be better off than we are, or are due to the survival of habits originally enforced by physical fear, but of which the origin is forgotten, is of a kind to give us pause. It logically carries with it the conclusion, however the conclusion may be disguised, that, in inciting ourselves or others to do anything because it ought to be done, we are at best making use of a serviceable illusion. And when this consequence is found to follow logically from the conception of man as in his moral attributes a subject of natural science, it may lead to a reconsideration of a doctrine which would otherwise have been taken for granted as the most important outcome of modern enlightenment. As the first charm of accounting for what has previously seemed the mystery of our moral nature passes away, and the spirit of criticism returns, we cannot but inquire whether a being that was merely a result of natural forces could form a theory of those forces as explaining himself. We have to return once more to that analysis of the conditions of knowledge, which forms the basis of all Critical Philosophy whether called by the name of Kant or no, and ask whether the experience of connected matters of fact, which in its methodical expression we call science, does not presuppose a principle which is not itself any one or number of such matters of fact, or their result.

Can the knowledge of nature be itself a part or product of nature in that sense of nature in which it is said to be an ob-

ject of knowledge? This is our first question. If it is answered in the negative, we shall at least have satisfied ourselves that man, in respect of the function called knowledge, is not merely a child of nature. We shall have ascertained the presence in him of a principle not natural, and a specific function of this principle in rendering knowledge possible. The way will then be so far cleared for the further question which leads us, in the language of Kant, from the Critique of Speculative to that of Practical Reason: the question whether the same principle has not another expression than that which appears in the determination of experience and through it in our knowledge of a world—an expression which consists in the consciousness of a moral ideal and the determination of human action thereby.

The question before us must not be confused with that commonly supposed to be at issue between spiritualists and materialists. It is one which equally remains to be put in whatever way we understand the relation between body and mind. We may have admitted most unreservedly that all the so-called functions of the soul are materially conditioned, but the question how there come to be for us those objects of consciousness, called matter and motion, on which we suppose the operations of sense and desire and thought to be dependent, will still remain to be answered. If it could be admitted that matter and motion had an existence *in themselves*, or otherwise than as related to a consciousness, it would still not be by *such* matter and motion, but by the matter and motion which we know, that the functions of the soul, or anything else, can for us be explained. Nothing can be known by help of reference to the unknown. But matter and motion, just so far as known, consist in, or are determined by, relations between the objects of that connected consciousness, which we call experience. If we take any definition of matter, any account of its 'necessary qualities,' and abstract from it all that consists in a statement of relations between facts in the way of feeling or between objects that we present to ourselves as sources of feeling, we shall find that there is nothing left. Motion, in like manner, has no meaning except such as is derived from a synthesis of the different positions successively held by one and the same body, and we shall try in vain to render an account to ourselves of position or succession, of a body or its identity, except as expressing relations of what is contained in experience, through which alone that content possesses a definite character and becomes a connected whole. What then is the source of these relations, as relations of the experienced, in other words, of that which exists for consciousness? What is the principle of union which renders them possible? Clearly it cannot itself be conditioned

by any of the relations which result from its combining and unifying action. Being that which so organises experience that the relations expressed by our definitions of matter and motion arise therein, it cannot itself be determined by those relations. It cannot be a matter or motion. However rigidly, therefore, we may exclude from our explanations of phenomena all causes that are not reducible to matter and motion, however fully we may admit that the nature which we know or may know is knowable only under strictly physical laws, we are none the less in effect asserting the existence of something which, as the source of a connected experience, renders both the nature that we know and our knowledge of it possible, but is not itself physically conditioned. We may decide all the questions that have been debated between materialists and spiritualists as to the explanation of particular facts in favour of the former, but the possibility of explaining them at all will still remain to be explained. We shall still be logically bound to admit that in a man, who can know a nature—for whom there is a cosmos of experience—there is a principle which is not natural and which cannot without a *ὑστέρον πρότερον* be explained as we explain the facts of nature.

There are certain accepted doctrines of modern philosophy—*e.g.*, that knowledge is only of phenomena, not of anything unrelated to consciousness, and that object and subject are correlative—from which this conclusion seems to follow so inevitably, that anyone who has adopted it must inquire anxiously why it is not more generally recognised. If nothing can enter into knowledge that is unrelated to consciousness; if relation to a subject is necessary to make an object, so that an object which no consciousness presented to itself would not be an object at all; it is as difficult to see how the principle of unity, through which phenomena become the connected system called the world of experience, can be found elsewhere than in consciousness, as it is to see how the consciousness exercising such a function can be a part of the world which it thus at least co-operates in making; how it can be a phenomenon among the phenomena which it unites into a knowledge. Why then do our most enlightened interpreters of nature take it as a matter of course that the principle of unity in the world of our experience is something which, whatever else it is—and they can say nothing else of it—is at any rate the negation of consciousness, and that consciousness itself is a phenomenon or group of phenomena in which this “nature” exhibits itself or results? And why is it that, when we have professedly discarded this doctrine, we still find it to a great extent controlling our ordinary thoughts? There must be reasons for this inconsistency, which should be

duly considered if we would understand what we are about in maintaining that there is a sense in which man is related to nature as its author as well as one in which he is related to it as its child.

The reader is probably acquainted with Kant's dictum that "the understanding makes nature". It gives no doubt a somewhat startling expression to the revolution in philosophy which Kant believed himself to have introduced, and which he compared to the change effected by the Copernican theory in men's conception of the relative positions of the earth and the sun. When we inquire, however, into the precise sense in which Kant used the expression, we find that its meaning is subject to a qualification which testifies to the difficulty experienced by Kant himself in carrying out the doctrine which the words seemed to convey. "*Macht zwar Verstand die Natur, aber er schafft sie nicht.*" The understanding "makes" nature, but out of a material which it does not make. That material, according to Kant, consists in phenomena or "data" of sensibility, given under the so-called forms of intuition, space and time. This apparent ascription of nature to a two-fold origin—an origin in understanding in respect of its form as a nature, as a single system of experience; an origin elsewhere in respect of the "matter" which through the action of understanding becomes a nature—cannot but strike us as unsatisfactory. Perhaps it may not be a doctrine in which we can permanently acquiesce, but meanwhile it represents fairly enough on its two sides the considerations which on the one hand lead us to regard nature as existing only in relation to thought, and those on the other which seem obstinately opposed to such a view.

To say with Kant that the understanding is the principle of objectivity, that only through understanding is there for us an objective world, is sure to seem at first sight the extreme of perversity. We have come to think of the understanding as specially an agency of our own, and of the objective world as specially that which is presented to us independently of any such agency; as that which we find and do not make, and by which we have to correct the fictions of our own minds. When we ask, however, whether any impression is or represents anything "real and objective," what exactly does the question mean, and how do we set about answering it? It is not equivalent to a question whether a feeling is felt. Some feeling must be felt in order to the possibility of the question being raised at all. It is a question whether a given feeling is what it is taken to be; or, in other words, whether it is related as it seems to be related. It may be objected indeed that, though *some* feeling or other must be felt in order to give any meaning to the question as to

the objectivity of the impression or its correspondence with reality, yet still this question may and often does mean merely whether a *particular* feeling is felt. This is true, but a particular feeling is a feeling related in a certain way, and the question whether a particular feeling is really felt is always translatable into the form given—Is a feeling, which is undoubtedly felt, really related as some one thinking about it takes it to be? If an engine-driver, under certain conditions, permanent with him or temporary, as we say, 'sees a signal wrong,' his disordered vision has its own reality just as much as if he saw right. There are relations between combinations of moving particles on the one side and his visual organs on the other, between the present state of the latter and certain determining conditions, between the immediate sensible effect and the secondary impressions which it in turn excites, as full and definite—with sufficient inquiry and opportunity as ascertainable—as in any case of normal vision. There is as much reality in the one case as in the other, but it is not the same reality: *i.e.*, it does not consist in the same relations. The engine-driver mistakes the effect of one set of relations for that of another, one reality for another, and hence his error in action. He may be quite innocent of a scientific theory of vision, but he objectifies his sensations. He interprets them as related in a certain way, and as always the same in the same relations; or, to use an equivalent but more familiar expression, as signs of objects from which he distinguishes his feelings and by which he explains them. Were this not the case, his vision might be normal or abnormal, but he would be incapable of mistaking one kind of reality for another, since he would have no conception of reality at all.

The terms 'real' and 'objective,' then, have no meaning except for a consciousness which presents its experiences to itself as determined by relations, and at the same time conceives a single and unalterable order of relations determining them, with which its temporary presentation, as each experience occurs, of the relations determining it may be contrasted. For such a consciousness, perpetually altering its views of the relations determining any experience under the necessity of combining them in one system with other recognised relations, and for such a consciousness only, there is significance in the judgment that any experience seems to be so and so, *i.e.*, to be related in a certain way, but really is otherwise related. We shall have afterwards to consider the question whether the consciousness, for which alone this contrast of the real and the apparent is possible, has anything to do with the establishment of the relations in which it conceives reality to consist—whether the

conception of reality has any identity with the act by which reality is constituted. But even if this latter question is waived or answered in the negative, there will still be an important sense in which understanding, or consciousness as acting in the manner described, may be said to be the principle of objectivity. It will be through it that there is *for us* an objective world; through it that we *conceive* an order of nature, with the unity of which we must reconcile our interpretations of phenomena, if they are to be other than 'subjective' illusions. Of course it may very well be that many a man would disclaim any such conception, who is yet constantly acting upon the distinction between what he believes to be mere appearance and what he believes to be reality. But want of familiarity with the abstract expression of a conception, want of ability to analyse it, is no evidence that the conception is inoperative upon the experience of the person who, from this want of familiarity or ability, would say, if he were asked, that he had it not, or knew not what it meant. The proof of the necessity of certain ideas has never been supposed by any one who knew what he was about to rest upon the fact that every one was aware of having them. Such a proof, to say nothing of the well-worked appeal to savages or the uneducated, would be at the mercy of every lively gentleman who was pleased to say that he searched his breast for such ideas in vain. The necessity of a conception, as distinct from the logical (or rather rhetorical) necessity of a conclusion contained in premisses already conceded, means that it is necessary to the experience without which there would not for us be a world at all; and there can be neither proof nor disproof of such necessity as is claimed for any conception, but through analysis of the conditions which render this experience possible. Unless the accuracy or sufficiency of the analysis can be disputed, the necessary character of the ideas which it exhibits as operative in the formation of experience, is unaffected by the inability of any one to recognise them in that abstract form to which the analysis reduces them, but which, just because they are operative in a concrete experience, is not the form of their familiar use. A man who is quite at home with the distinction between facts and fancies may think it strange to be told that the distinction implies a conception of the world as a single system of relations; that this is the conception on the strength of which he constantly sets aside as fancy what he had taken to be fact, because he finds that the supposed relations which for him formed the nature of the fact are not such as can be combined with others that he recognises in one intelligible system. Such language may convey no meaning to him, but the question will still remain whether upon reflection the dis-

tion can be otherwise accounted for. When we analyse our idea of matter of fact, can we express it except as an idea of a relation which is always the same between the same objects; or our idea of an object except as that which is always the same in the same relations? And does not each expression imply the idea of a world as a single and eternal system of related elements, which may be related with endless diversity but must *be* related still? If we may properly call the consciousness, which yields this idea 'understanding,' are we not entitled to say that understanding is the source of there being for us an objective world, that it is the principle of objectivity?

So far we have only reached the conclusion that a conception, to which understanding is related as faculty to function, is the condition of our ability to distinguish a real from the unreal, matter of fact from illusion. It will be said perhaps that so much pains need not have been spent on establishing a proposition which in effect merely tells us that without a conception of an order of nature we could not conceive an order of nature. Is not this, it may be asked, either an identical proposition or untrue—an identical proposition, if understood strictly as thus put; untrue, if taken to mean that the conception of an order of nature does not admit of being generated out of materials other than itself? Now it is just the difficulties in the way of explaining the origin of the conception in question out of anything else than judgments which presuppose it, that we wish to exhibit. They are the difficulties which beset any theory that would treat the knowledge of nature as itself the result of natural processes. It is through *experience* that every such theory must suppose the resulting knowledge to be produced. But experience, as most students of philosophy must now be aware, is a term used in very different senses. In this case an experience which is to yield the required result must not be merely an experience in the sense in which, for instance, a plant might be said to experience a succession of atmospheric or chemical changes, or in which we ourselves pass through a definite physical experience during sleep or in respect of the numberless events which affect us but of which we are not aware. Such an experience may no doubt gradually alter to any extent the mode in which the physical organism reacts upon stimulus. It may be the condition of its becoming organic to intellectual processes, but between it and experience of the kind which is to yield a knowledge of nature there is a chasm which no one, except by confusion of speech, has attempted to fill. Or to speak more precisely, between the two senses of experience there is all the difference that exists between change and consciousness of change.

Experience of the latter kind must be experience of matters of fact *recognised as such*. It is possible, no doubt, to imagine a psychological history of this experience, and to trace it back to a stage in which the distinction between fact and fancy is not yet formally recognised. But there is a limit to this process. An experience which distinguishes fact from fancy cannot be developed out of one which is not in some form or other a consciousness of events as related or as a series of changes. It has commonly, and with much probability, been held that the occurrence of the unexpected, by exciting distrust in previously established associations of ideas, has at any rate a large share in generating the distinction of what seems from what is. But the shock of surprise is one thing, the correction of a belief quite another. Unless there were already a consciousness alike of the events, of which the ideas have become associated as a related series, and of the newly observed event as a member of the same, the unfamiliar event might cause a disturbance of the nerves or the 'psychoplasm,' but there would neither be an incorrect belief as to an order of events to be corrected by it, nor any such correlation of the newly observed event with what had been observed before as could suggest a correction. But a consciousness of events as a related series—experience in the most elementary form in which it can be the beginning of knowledge—has not any element of identity with, and therefore cannot properly be said to be developed out of, a mere series of related events, of successive modifications of body or soul, such as is experience in the former of the senses spoken of. No one and no number of a series of related events can be the consciousness of the series as related. Nor can any product of the series be so either. Even if this product could be anything else than a further event, it could at any rate only be something that supervenes at a certain stage upon such of the events as have so far elapsed. But a consciousness of certain events cannot be anything that thus succeeds them. It must be equally present to all the events of which it is the consciousness. For this reason an intelligent experience, or experience as the source of knowledge, can neither be constituted by events of which it is the experience nor be a product of them.

'Perhaps not,' it may be replied, 'but may it not be a product of previous events?' If it is so, a series of events of which there is no conscious experience must be supposed to produce a consciousness of another series. On any other supposition, the difficulty is only postponed. For if the series of events which produces a certain consciousness of other events is one of which there is a consciousness, this consciousness, not being explicable as the product of the events of which it is the consciousness,

will have in turn to be referred to a prior series of events ; and ultimately there will be no alternative between the admission of a consciousness which is not a product of events at all and the supposition stated—the supposition that the primary consciousness of events results from a series of events of which there is no consciousness. But this supposition, when we think of it, turns out to be a concatenation of words to which no possible connexion of ideas corresponds. It asserts a relation of cause and effect, in which the supposed cause lacks all the characteristics of a cause. It may be questioned whether we may admit anything as a cause which does not explain its supposed effect, or is not equivalent to the conditions into which the effect may be analysed. But granting that we may, a cause must at least be that to which experience testifies as the uniform antecedent of the effect. Now a series of events of which there is no consciousness is certainly not a set of conditions into which consciousness can be analysed. And as little can it be an antecedent uniformly associated with consciousness in experience, for events of which there is no consciousness cannot be within experience at all.

It seems necessary, then, to admit that experience, in the sense of a consciousness of events as a related series—and in no other sense can it help to account for the knowledge of an order of nature—cannot be explained by any natural history, properly so called. It is not a product of a series of events. It does not arise out of materials other than itself. It is not developed by a natural process out of other forms of natural existence. Given such a consciousness, the scientific conception of nature, no less than the everyday distinction between fact and fancy, between objective reality and subjective illusion, can be exhibited as a development of it, for there is an assignable element of identity between the two. But between the consciousness itself on the one hand, and on the other anything determined by the relations under which a nature is presented to consciousness, no process of development, because no community, can be really traced. Nature, with all that belongs to it, is a process of change: change on a uniform method, no doubt, but change still. All the relations under which we know it are relations in the way of change or by which change is determined. But neither can any process of change yield a consciousness of itself, which in order to be a consciousness of the change must be equally present to all stages of the change: nor can any consciousness of change, since the whole of it must be present at once, be itself a process of change. There may be a change into a state of consciousness of change, and a change out of it, on the part of this man or that ; but within the con-

sciousness itself there can be no change, because no relation of before and after, of here and there, between its constituent members—between the presentation, for instance, of point A and that of point B in the process which forms the object of the consciousness.

From the above considerations thus much at any rate would seem to follow: that a form of consciousness, which we cannot explain as of natural origin, is necessary to our conceiving an order of nature, an objective world of fact from which illusion may be distinguished. In other words, an understanding—for that term seems as fit as any other to denote the principle of consciousness in question—irreducible to anything else, 'makes nature' for us in the sense of enabling us to conceive that there is such a thing. Now that which the understanding thus presents to itself consists, as we have seen, in certain relations regarded as forming a single system. The next question, then, will be whether understanding can be held to 'make nature' in the further sense that it is the source, or at any rate a condition, of there being these relations. If it cannot, we are left in the awkward position of having to suppose that while the conception of an order of nature on the one side, and that order itself on the other, are of different and independent origin, there is yet some unaccountable pre-established harmony through which there comes to be such an order corresponding to our conception of it. This indeed might be urged as a reason for seeking some way of escape from the conclusion at which we have just arrived. But before we renew an attempt which has often been made and failed, let us see whether the objections to the other alternative—to the view that the understanding which presents an order of nature to us is in principle one with an understanding which constitutes that order itself—have really the cogency which common-sense seems to ascribe to them.

The traditional philosophy of common-sense, we shall find, speaks upon the point with an ambiguity which affords a presumption of its involving more difficulty than might at first sight appear. No one is more emphatic than Locke in opposing what is real to what we "make for ourselves," the work of nature to the work of the mind. Simple ideas or sensations we certainly do not "make for ourselves". They therefore and the matter supposed to cause them are, according to Locke, real.¹ But relations are neither simple ideas nor their material archetypes. They therefore, as Locke explicitly holds, fall under the head of the work of the mind, which is opposed to the real.²

¹ *Essay concerning Human Understanding*, II., xii., 1.

² *Ibid.*, II., xxv., 8.

But if we take him at his word and exclude from what we have considered real all qualities constituted by relation, we find that none are left. Without relation any simple idea would be undistinguished from other simple ideas, undetermined by its surroundings in the cosmos of experience. It would thus be unqualified itself, and consequently could afford no qualification of the material archetype, which yet according to Locke we only know through it or, if otherwise, as the subject of those "primary qualities" which demonstrably consist in relations.¹ In short, the admission of the antithesis between the real and the work of the mind, and the admission that relation is the work of the mind, put together, involve the conclusion that nothing is real of which anything can be said. Our ordinary way out of the difficulty consists in keeping the two admissions apart, without, however, surrendering either. We maintain the opposition between the real and the work of the mind exactly as it was asserted by Locke, and if we are less explicit in accounting relations to be the work of the mind, it is not because we have any theory of the real which more logically admits them than does Locke's. Yet we have no scruple in accepting duly verified knowledge as representing reality, though what is known consists in nothing else than relations. We neither ask ourselves how it can be that a knowledge of relations should be a knowledge of reality, if the real is sincerely simple sensation or that which copies itself in simple sensation, nor what other account we can give of the real without qualifying the antithesis between the work of the mind and it. It is in fact from our adoption of this antithesis that we come to accept that identification of the real with simple sensation or its archetype which, as Locke was aware, implies the unreality of relations. But when in our processes of knowledge we have virtually recognised relations as constituting the very essence of reality, we do not reconsider our definition of the real in the light of this recognition. We do not lay our procedure in what we regard as knowledge of the real alongside Locke's view of the real, which is also ours, so as to ask whether they are consistent with each other. And hence we are not led to call in question the antithesis on which that view depends.

As it is a serious matter, however, to accept a view of the real which such a thinker as Locke could not reconcile with the reality of relations, and which logically implies that knowledge is not of the real; and as on the other hand there is something in the opposition between the real and the work of the mind which seems to satisfy an imperative demand of common-sense;

¹ *Essay concerning Human Understanding*, II., viii., 15 and 23. II., xxx., 2.

it becomes important to inquire whether we interpret that demand aright. Is there not a conception of the real behind the opposition in question, which seems to require us to accept it, but which in truth we misinterpret in doing so?

We constantly find Locke falling back on the consideration that of simple ideas "we cannot make one to ourselves". They "force themselves upon us whether we will or no". It is this which entitles them in his eyes to be accounted real. "The work of the mind," on the other hand, he considers arbitrary. A man has but to think and he can make ideas of relation for himself as he pleases. He thus indicates what we may call the operative conception—operative as governing the action of our intelligence—which underlies the opposition between the real and the work of the mind. This is the conception which we have described already as that of a single and unalterable system of relations. It is not the work of the mind, as such, that we instinctively oppose to the real, but the work of the mind as assumed to be arbitrary and irregularly changeable. In truth, however, there is no such thing. The very question, What is the real?—which we seem to answer by help of this opposition—is a misleading one, so far as it implies that there is something else from which the real can be distinguished. We are apt to make merry over the crude logic of Plato in supposing that there are objects, described as *μὴ ὄντα*, which stand in the same relation to ignorance as *τὰ ὄντα* to knowledge, and other objects, described as *τὰ μετέξυ*, which stand in a corresponding relation to mere opinion. Of this fallacy, as of most others that are to be found in him, Plato himself supplies the correction, but much of our language about the real implies that we are ourselves its victims. If there is a valid opposition between the work of the mind and something else which is not the work of the mind, the one must still be just as real as the other. Of two alternatives, one. Either the "work of the mind" is a name for nothing, expressing a mere privation or indeterminateness, a mere absence of qualities, in which case nothing is conveyed by the proposition which opposes the real or anything else to it: or, on the other hand, if it has qualities and relations of its own, then it is just as real as anything else. Through not understanding the relations which determine the one kind of object—that ascribed to the work of the mind—as distinct from those which determine the other—that ascribed to some other agency—we may confuse the two kinds of object. We may take what is really of the one kind to be really of the other. But this is not a confusion of the real with the unreal. The very confusion itself, the mistake of supposing what is related in one way to be related in another, has its own reality. It has its history, its place in the development

of a man's mind, its causes and effects; and as so determined, it is as real as anything else.

It is thus in vain that we seek to define the real by finding either in the work of the mind or elsewhere an unreal to which it may be opposed. Is there, then, no meaning in an opposition which is constantly on our tongues? Undoubtedly that which any event seems to us to be may be—nay always is—more or less different from what it really is. The relations by which we judge it to be determined are not, or at any rate fall short of, those by which it is really determined. But this is a distinction between one particular reality and another; not between a real, as such or as a whole, and an unreal, as such or as a whole. The illusive appearance, as opposed to the reality, of any event is what *that* event really is not; but at the same time it really is something. It is real, not indeed with the particular reality which the subject of the illusion ascribes to it, but with a reality which a superior intelligence might understand. The relations, by which in a false belief as to a matter of fact we suppose the event to be determined, are not non-existent. They are really objects of a conceiving consciousness. As arising out of the action of such a consciousness, as constituents of a world which it presents to itself, they are no less real than are the actual conditions of the event which is thought to be, but is not really, determined by them. It is when we reflect on the judgments in which we are perpetually deciding that what has previously been taken to be the reality of a particular event is a mere appearance, *i.e.*, not the reality of that particular event—or rather when we reflect on the language in which those judgments have been expressed—that we come to speak of the real as an abstract universal in contrast with another abstract universal, the unreal. Thus for a contrast which is in truth a contrast between two acts of judgment—the act of judging an event to be determined by certain relations which, according to the order of the universe, do determine it, and that of judging it to be determined by relations other than these—we substitute another, which exists merely in words, but to which we fancy that we give a meaning by identifying the unreal with the work of the mind, as opposed to a real which has some other origin, we cannot say what.

What we have so far sought to show has been (1), generally, that an attempt to define the real by distinction from anything else is necessarily futile—the result of a false abstraction from the distinction between the real nature of one event or object and that of another—and (2), specially, that the antithesis between the real and the work of the mind is invalid, not because the real is the work of the mind—whether it is so or not we

have yet to inquire—but because the work of the mind is real. The ‘mere idea’ of a hundred thalers, to use the familiar instance, is no doubt quite different from the possession of them, not because it is unreal, but because the relations which form the real nature of the idea are different from those which form the real nature of the possession.

So much it was necessary to show in order that the inquiry, whether it is due to ‘understanding’ not merely that we are able to conceive a nature but that there is such a thing as nature at all, might not be prejudiced by a preconception which would make it seem equivalent to an inquiry whether the real could be the work of the unreal. If now for the futile question, What is the real? which we can only answer by saying that the real is everything, we pass to one more hopeful—How do we decide whether any particular event or object is really what it seems to be, or whether our belief about it is true?—the answer must be that we do so by testing the unalterableness of the qualities which we ascribe to it, or which form its apparent nature. A certain hill appears to-day to be near: yesterday under different conditions of atmosphere it appeared to be remote. But the real nature of the event which took place in yesterday’s appearance cannot, we judge, thus change. What it was really, it was unalterably. There may have been a change from that appearance to another, but not a change of or in whatever was the reality of the appearance. The event of yesterday’s appearance, then, must have been determined by conditions other than those which determine to-day’s. But if both appearances depended solely on the position of the hill, they would be determined by the same conditions. Therefore we must have been wrong in believing the hill to be so remote as we believed it to be yesterday, or in believing it to be so near as we believed it to be to-day, or in both beliefs: wrong in respect of the relation which we supposed to exist between the several appearances and the distance of the hill.

With sufficient time and command of detail it would not be difficult to show how the conviction here illustrated, that whatever anything is really it is unalterably, regulates equally our most primitive and our most developed judgments of reality—the every-day supposition of there being a multitude of separate things which remain the same in themselves while their appearances to us alter, and the scientific quest for uniformity or unalterableness in a law of universal change. Through a slight confusion of thought and expression, it may issue either in the sensational atomism of Locke or in the material atomism of popular science. A sensation is the unalterable effect of its conditions, whatever those conditions may be. It is unalterably

related to other sensations. Our opinion about its conditions or relations may vary, but not the conditions or relations themselves, or the sensation determined by them. Hence when a man looks into his breast, as Locke bids him do, simple feelings—feelings apart from intellectual interpretations and combinations of them—seem alone unalterable in contrast with our judgments about them. In truth the unalterableness belongs not to any simple feeling, for our feelings change every moment upon us, but, as we have said, to the relation between it and its conditions or between it and other feelings, and such a relation is neither itself a feeling nor represented in our consciousness by a feeling. This distinction, however, is overlooked. The unalterableness of the fact that a certain feeling is felt under certain conditions, is ascribed to the simple feeling, or simple idea, as such: and unalterableness being the test by which we ascertain whether what we have believed to be the nature of any event is really so or not, the simple feeling, which by itself cannot properly be said to be really anything, comes to be regarded either as alone real, according to the ideal form of sensationalism, or as alone representing an external reality, according to the materialistic form of the same doctrine. On the other hand, reflection upon the ‘perpetual flux’ of sensation suggests the view that it is not real in the same sense as its material conditions. The old dictum ascribed to Democritus—*νόμος γλυκὺ καὶ νόμος πικρόν, νόμος θερμόν, νόμος ψυχρόν, νόμος χρόνῃ· ἐτεῆ δὲ ἄτομα καὶ κενόν*—expresses a way of thinking into which we often fall. The reality which in truth lies in the relations, according to one law or system of relation, between feelings and their material conditions—not in the material conditions abstracted from the feelings any more than in the feelings abstracted from their material conditions—we are apt to ascribe exclusively to the latter. We think obscurely of matter and motion as real in some way in which nothing else is. Nor do we stop here. The demand for unalterableness in what we believe to be real, when once we are off the right track of seeking it in a uniform law of change, leads us to suppose that the ‘reality of things’ is only reached when we have penetrated to atoms which in all changes of their motion and distribution remain intrinsically the same.

Let us consider now how we stand. We have rejected the question, What is or constitutes the real? as intrinsically unmeaning, because it could only be answered by a distinction which would imply that there was something unreal. The question arises, we have seen, out of an abstraction from our constant inquiry into the real nature of this or that particular appearance or event—an inquiry in which we always seek for

an unchanging relation between the appearance and its conditions, or again for an unchanging relation between these and certain other conditions. The complete determination of an event it may be impossible for our intelligence to arrive at. There may always remain unascertained conditions which may render the relation between an appearance and such conditions of it as we know liable to change. But that there is an unalterable order of relations, if we could only find it out, is the presupposition of all our inquiry into the real nature of appearances, and such unalterableness implies their inclusion in one system which leaves nothing outside itself. Are we then entitled to ask—and if so, are we able to answer—the further question, What is implied in there being such a single, all-inclusive, system of relations? or, What is the condition of its possibility? If this question can be answered, the condition ascertained will be the condition of there being a nature and of anything being real in the only intelligible sense that we can attach to the words ‘nature’ and ‘real’. It would no doubt still be open to the sceptic, should this result be attained, to suggest that the validity of our conclusion, upon our own showing, depends upon there really being such an order of nature as our quest of knowledge supposes there to be, which remains unproven. But as the sceptic, in order to give his language and meaning, must necessarily make the same supposition—as he can give no meaning to reality but the one explained—his suggestion that there really may not be such an order of nature is one that conveys nothing at all.

First, then, is there any meaning in the question just put? Having set aside as unmeaning the question, What is the real? can we be entitled to ask what is implied in there being a nature of things? If the former question would have been only answerable on the self-contradictory supposition of there really being something other than the real from which it could be distinguished, will not the latter in like manner be only answerable on the equally impossible supposition of there being something outside the nature of things, outside the one all-inclusive system of relations, by reference to which this nature or system can be explained? To this we reply that the question stated is or is not one that can be fitly asked according as the conception of nature, of a single all-inclusive system of relations, is or is not one that can stand alone, is or is not one that requires something else to render it intelligible. To suppose that this ‘something else,’ if nature were found unthinkable without it, is related to those conditions, of which the relation to each other forms the system of nature, in the same way in which these are related to each other, would no doubt be in contradiction with

our account of this system as one and all-inclusive. It could not therefore be held to be related to them as, for instance, an invariable antecedent to an invariable sequent, or as one body to another outside it. But there would be no contradiction in admitting a principle which renders all relations possible, and is itself determined by none of them, if, on consideration of what is needed to constitute a system of relations, we found such a principle to be requisite.

This, then, is the consideration which we have now to undertake. Relation is to us such a familiar fact that we are apt to forget that it involves all the mystery, if it be a mystery, of the existence of many in one. Whether we say that a related thing is one in itself, manifold in respect of its relations, or that there is one relation between manifold things, *e.g.*, the relation of mutual attraction between bodies—and one expression or the other we must employ in stating the simplest facts—we are equally affirming the unity of the manifold. Abstract the many relations from the one thing and there is nothing. They, being many, determine or constitute its definite unity. It is not the case that it first exists in its unity, and then is brought into various relations. Without the relations it would not exist at all. In like manner the one relation is a unity of the many things. They, in their manifold being, make the one relation. If these relations really exist, there is a real unity of the manifold, a real multiplicity of that which is one. But a plurality of things cannot of themselves unite in one relation, nor can a single thing of itself bring itself into a multitude of relations. It is true, as we have said, that the single things are nothing except as determined by relations which are the negation of their singleness, but they do not therefore cease to be single things. Their common being is not something into which their several existences disappear. On the contrary, if they did not survive in their singleness, there could be no relation between them—nothing but a blank featureless identity. There must, then, be something other than the manifold things themselves which combines them without effacing their severalty. With such a combining agency we are familiar as our intelligence. It is through it that the sensation of the present moment takes a character from comparison with the sensation of a moment ago, and that the occurrence consisting in the transition from one to the other is presented to us. It is essential to the comparison and to the character which the sensations acquire from the comparison, essential, too, to their forming an observable event or succession, that one should not be fused with the other, that the distinct being of each should be maintained. On the other hand, in the relation to which their distinctness is thus ne-

cessary they are at the same time united. But if it were not for the action of something which is not either of them or both together, there would be no alternative between their separateness and their fusion. One might give place to the other, or both together might be combined into a third, but a unity in which their distinctness is preserved could not be constituted without the relating act of an intelligence which does not blend with either.

The above is an instance of relation between sensations which, as brought into relation by intelligence, become sensible objects or events. But the same or an analogous action is necessary to account for any relation whatever—for a relation between material atoms as much as any other. Either then we must deny the reality of relations altogether and treat them as fictions of our combining intelligence; or we must hold that, being the product of our combining intelligence, they are yet ‘empirically real’ on the ground that our intelligence is a factor in the real of experience; or if we suppose them to be real otherwise than merely as for us, otherwise than in the ‘cosmos of our experience,’ we must recognise as the condition of this reality the action of some unifying principle analogous to that of our understanding.

As we have seen, the first of these alternative views, if consistently carried out, will not allow us to regard anything as real of which anything can be said, since all predication is founded on relation of some kind. It therefore naturally leads to the second. All that we in fact count real turns out to be determined by relations. Feeling may be the revelation or the test of the real, but it must be feeling in certain relations, or it neither reveals nor tests anything. Thus we are obliged to recognise a reality, at least of that kind which in our every-day knowledge and action we distinguish from illusion, in what is yet the work of the mind, or at any rate must be held to be so until relations can be accounted for without a relating act or that act referred to something else than the mind. Hence with those who adhere to the opposition between the real and the work of the mind, and who at the same time cannot ignore the work of the mind in the constitution of relations, there arises a distinction between reality in some absolute sense—the reality of ‘things in themselves’ which are supposed to be wholly exempt from any qualification through relating acts of the mind, but of which, for that reason, nothing can be known or said—and the ‘empirical’ reality of that which we distinguish from illusion as standing in definite relations to the universe of our experience.

This distinction governs the theory of Kant. It is more easy

to point out the embarrassments and inconsistencies into which it leads him than to get rid of the distinction itself. Ordinary criticism of Kant, indeed, has not taken much heed of the distinction or of its perplexing results. It has been too busy in refuting his doctrine that "laws of nature" are derived from understanding to inquire closely into his view of the relation between nature, in his sense of the term, and "things-in-themselves". It has been gaining apparent triumphs, due to a misunderstanding of the question at issue, over the strongest part of his system, while it has left the weakest unassailed. There have been abundant proofs of what was not in dispute, that our knowledge of laws of nature is the result of experience, but the question whether phenomena could be so related as to constitute the nature which is the object of our experience without the unifying action of understanding is seldom even touched. Given an experience of phenomena related to each other in one system—so related that whatever an object is really, or according to the fulness of its relations, it is unalterably—it is easy to show that our knowledge of laws of nature is derived from it. Such experience in its most elementary form is already implicitly a knowledge that there are laws of nature, and only needs to be reflected on in order to become so explicitly. Having become so explicitly, the development of the experience—through cognisance of relations of which there has previously been no experience or of which the experience has not been reflected on—becomes a growing knowledge of what the laws of nature in particular are. But the derivation of knowledge from an experience of unalterably related phenomena is its derivation from objects unalterably related in consciousness. If the relation of the objects were not a relation of them in consciousness, there would be no experience of it. The question then arises how a succession of feelings becomes such a relation of objects in consciousness. If a relation of objects existed or could be known to exist otherwise than for consciousness, this would not help to account for what has to be accounted for, which is wholly a process of consciousness. The feelings which succeed each other are no doubt due to certain related conditions, which are not feelings. But granting for the moment that these conditions and their relation exist independently of consciousness, in accounting for a multitude of feelings, they do not account for the experience of related objects. Of two objects which form the terms of a relation one cannot exist as so related without the other, and therefore cannot exist before or after the other. For this reason the objects between which a relation subsists, even a relation of succession are, just so far as related, not successive. In

other words, a succession always implies something else than the terms of the succession, and that a 'something else' which can simultaneously present to itself objects as existing not simultaneously but one before the other.

Thus in order that successive feelings may be related objects of experience, even objects related in the way of succession, there must be in consciousness an agent which distinguishes itself from the feelings, uniting them in their severalty, making them equally present in their succession. And so far from this agent being reducible to, or derivable from, a succession of feelings, it is the condition of there being such a succession; the condition of the existence of that relation between feelings, as also of those other relations which are not indeed relations between feelings but which, if they are matter of experience, must have their being in consciousness. If there is such a thing as a connected experience of related objects, there must be operative in consciousness a unifying principle, which not only presents related objects to itself, but at once renders them objects and unites them in relation to each other by this act of presentation; and which is single throughout the experience. The unity of this principle must be correlative to the unity of the experience. If all possible experience of related objects—the experience of a thousand years ago and the experience of to-day, the experience which I have here and that which I might have in any other region of space—forms a single system; if there can be no such thing as an experience of unrelated objects; then there must be a corresponding singleness in that principle of consciousness which forms the bond of relation between the objects.

It is such a principle that Kant speaks of sometimes as the "synthetic unity of apperception," sometimes simply as "understanding". For the reasons stated there seems no way of escape from the admission that it is, as he says, "the basis of the necessary regularity of all phenomena in an experience":¹ the basis, that is to say, not merely of our knowledge of uniform relations between phenomena, but of there being those uniform relations. The source of the relations and the source of our knowledge of them is one and the same. The question, how it is that the order of nature answers to our conception of it—or, as it is sometimes put, the question, whether nature really has, or, having, will continue to have, the uniformity which belongs to it in our conception—is answered by recognition of the fact that our conception of an order of nature, and the relations

¹ Kant's *Werke*, Ed. Rosenkranz, II., p. 114; in Hartenstein's Edition (1868), p. 583.

which form that order, have a common spiritual source. The uniformity of nature does not mean that its constituents are everywhere the same, but that they are everywhere related; not that "the thing which has been is that which shall be," but that whatever occurs is determined by relation to all that has occurred and contributes to determine all that will occur. If nature means the system of objects of possible experience, such uniformity necessarily arises in it from the action of the same principle which is implied in there being any relation between the objects of experience at all. A relation not related to all other relations of which there can be experience is an impossibility. It cannot exist except as constituted by the unifying subject of all experienced relations, and this condition of its possibility implies its connexion with all other relations that are or come to be so constituted. Every real relation, therefore, that is also knowable, is a necessary or 'objective' or unalterable relation. It is a fact of which the existence is due to the action of that single subject of experience which is equally, and in the same way, the condition of all facts that can be experienced; a fact which thus through that subject stands in definite and unchangeable connexion with the universe of those facts, at once determining and determined by them.

The result of this view is to overcome the separation, which in our ordinary thinking we assume, between the faculty or capacity or subjective process of experience on the one side and the facts experienced on the other. In first reflecting on our knowledge of a world, we always regard the facts known as existing quite independently of the activity by means of which they are known. Since it is obvious that the facts of the world do not come into existence when this or that person becomes acquainted with them, so long as we conceive of no intellectual action but that which this or that person exercises, we necessarily regard the existence or occurrence of the facts as independent of intellectual action. Hence arises the antithesis between the known or knowable world and the subject capable of knowing it, as between two existences independent of each other, or of which the former is at any rate independent of the latter. The mind is supposed to derive its materials from, and to act only in response to, the action of the world upon it; but the relations which it establishes between the materials, so derived, in its processes of distinction and comparison, of conception, judgment, and discourse, are supposed to be quite different, and to have a different source, from the relations between things or matters of fact in the world known. Upon further reflection, however, the untenableness of this view becomes apparent. It renders knowledge, as of fact or reality, inexplicable. It leaves

us without an answer to the question, how the order of relations, which the mind sets up, comes to reproduce those relations of the material world which are assumed to be of a wholly different origin and nature. Nor, as we pursue the analysis of the operations involved in the simplest perception of fact, are we able to detect any residuary phenomenon, amounting to a fact at all, that can be held to be given independently of a combining and relating activity which, if the antithesis between the work of the mind and the work of things be accepted, must be ascribed to the former. The necessity, therefore, of getting rid of the antithesis in question forces itself upon us: and it is natural that the way of doing so, which at first sight most commends itself to us, should consist in treating the mind and its work as a secondary result of what had previously been opposed to it as operations of nature. The weakness of such a method is twofold. In the first place there is the objection upon which we have already dwelt and which may be put summarily thus: that 'nature' is a *process of change*, and that the derivation of a *consciousness of change* from such a process is impossible. Secondly, such an explanation of the work of the mind, if nothing is known of it otherwise, is an explanation of it by the inexplicable. It is taking nature for granted, and at the same time treating that as a result of nature which is necessary to explain the possibility of there being such a thing as nature. For nature, as a process of continuous change, implies something other than the changes and to which they are relative. As a system of related elements it implies a unity, through relation to which the elements are related to each other. But with the reduction of thought or spirit or self-consciousness to a result of nature, if such reduction were possible, we should be eliminating the only agent that we know as maintaining an identity with itself throughout a series of changes, or as a principle that can unite a manifold without cancelling its multiplicity. In so explaining spirit we should be rendering the basis of our explanation itself inexplicable.

From the Kantian point of view, the dualism of nature and knowledge is disposed of in a different way. They are not identified but treated as forming an indivisible whole, which results from the activity of a single principle. It is not that first there is nature and that then there comes to be an experience and knowledge of it. Intelligence, experience, knowledge, are no more a result of nature than nature of them. If it is true that there would be no intelligence without nature, it is equally true that there would be no nature without intelligence. Nature is the system of related appearances, and related appearances are impossible apart from the action of an intelligence. They are

not indeed the same as intelligence; it is not reducible to them or they to it, any more than one of us is reducible to the series of his actions or that series to him; but without it they would not be, nor except in the activity which constitutes them has it any real existence. Does this then imply the absurdity that nature comes into existence in the process by which this person or that begins to think? Not at all, unless it is necessary to suppose that intelligence first comes into existence when this person or that begins to understand—a supposition not only not necessary, but which, on examination, will be found to involve impossibilities analogous to those which prevent us from supposing that nature so comes into existence. The difference between what may be called broadly the Kantian view and the ordinary view is this, that whereas according to the latter it is a world in which thought is no necessary factor that is prior to and independent of the process by which this or that individual becomes acquainted with it, according to the former it is a world already determined by thought, and which exists only in relation to thought, that is thus prior to, and conditions, our individual acquaintance with it. The growth of knowledge on our part is regarded not as a process in which facts or objects, in themselves unrelated to thought, by some inexplicable means gradually produce intelligible counterparts of themselves in thought. The true account of it is held to be that the concrete whole, which may be described indifferently as an eternal intelligence realised in the related facts of the world, or as a system of related facts rendered possible by such an intelligence, partially and gradually reproduces itself in us, communicating piece-meal but in inseparable correlation understanding and the facts understood, experience and the experienced world.

There are difficulties enough, no doubt, in the way of accepting such a form of 'idealism,' but they need not be aggravated by misunderstanding. It is simply misunderstood if it is taken to imply either the reduction of facts to feelings—impressions and ideas, in Hume's terminology—or the obliteration of the distinction between illusion and reality. The reduction of facts to relations is the very reverse of their reduction to feelings. No feeling, as such or as felt, is a relation. We can only suppose it to be so through confusion between it and its conditions, or between it and that fact of its occurrence which is no doubt related to other facts, but, as so related, is not felt. Even a relation between feelings is not itself a feeling or felt. A feeling can only be felt as successive to another feeling, but the terms of a relation, as we have seen, even though the relation be one of succession, do not succeed one another. In order to constitute the relation they must be present together, so that to con-

stitute a relation between feelings there must be something other than the feelings for which they are equally present. The relation between the feelings is not felt, because it is only for something that distinguishes itself from the feelings that it can subsist. It is our cognisance of the successiveness or transitoriness of feelings that makes us object intuitively to any idealism which is understood to imply an identification of the realities of the world with the feelings of men. Facts, we are sure, are in some way permanent. They are not "like the bubbles on a river, a moment here then gone for ever". But if they were feelings as we feel them, they would be so. They would not be "stubborn things," for as each was felt it would be done with. They would not form a world to which we have to adapt ourselves, for in order to make a world they must coexist, which feelings, as we feel them, do not. But the idealism which interprets facts as relations, and can only understand relations as constituted by a single spiritual principle, is chargeable with no such outrage on common-sense. On the contrary, its very basis is the consciousness of objectivity. Its whole aim is to articulate coherently the conviction of there being a world of abiding realities other than, and determining, the endless flow of our feelings. The source of its differences from ordinary realism lies in its being less easily satisfied in its analysis of what the existence of such a world implies. The mere statement that facts are not feelings, that things are not ideas, that we can neither feel nor think except contingently upon certain functions of matter and motion being fulfilled, does not help us to understand what facts and things, what matter and motion, are. It does not enable us, when we seek to understand these expressions, to give them any meaning except such as is derived from experience and, if from experience, then from relations that have their being only for an intelligent consciousness.

T. H. GREEN.

(To be continued.)

II.—MIND AND REALITY.

IN an article in MIND XXIII., the present writer attempted a criticism of certain modern hypotheses concerning Reality. Destructive work being much easier than constructive, this second study attempts with some dread the task of considering the whole subject from another point of view. Yet the comfort for the writer lies in the fact that the thoughts here to be set forth are in the main not new. The need seems to be just now that certain ideas known, but in our age too much neglected, should be, not simply revived, but rather reformed, to bring them into closer connexion with modern progress.

This study will fall into two parts. In the first we shall suppose our whole task to be the suggestion of a plausible, *i.e.*, of a simple, adequate, and consistent hypothesis about the nature of external reality. In the second part we shall consider more critically the nature of such hypotheses. In this first part, then, we shall suppose that, by a perfect theory of knowledge, the following result has been reached: Human beings are able to form ideas that correspond in some way with a real world, outside of themselves. That is, the sequence of human ideas corresponds to sequences of external events, or to relations of coexistence among external things. The necessary or uniform connexions of human ideas correspond to regular or to universal connexions among external things. Or, in the brief form of Mr. Herbert Spencer's phraseology, to each necessary relation $a : b$ in human consciousness, there corresponds a relation $A : B$ in the external world. Suppose, then, that all this has been established. No one will admit more readily than the writer that this supposition is merely tentative. The theory of knowledge is yet to be completed, and between its conception and its realisation there are wide oceans of doubt. We shall in fact touch upon the problems of this theory in the second part of our paper. But for the moment suppose admitted what scientific thought generally takes for granted, *viz.*, the correspondence of inner and outer relations in such wise that the former are naturally copies of the latter. And, on this foundation, suppose that we intend to consider what hypothesis as to the nature of the related terms A and B in the external world is, on the whole, the most plausible.

I.

For the sake of avoiding controversy we may for the moment leave out of account two old questions. We cannot really escape either, and both will sternly confront us before we

get in at the door of the temple of certainty. But here at the outset we are playing with hypotheses, and may be absolved from the responsibility of securing ourselves beforehand from all possible attacks. The first is the question of the idealists: How can any reality be conceived unless as implying or including states of consciousness? For the moment we will waive the Berkeleyan contention altogether; for we are not now concerned to prove by metaphysical analysis the universal coincidence of consciousness and reality. We wish merely a plausible hypothesis to be advanced as to the nature of what more popular thought means by reality. The second question that at the outset we avoid is the one concerning the ground of the assumed agreement between the external and the internal orders of facts. Whether this ground lies in a causal determination of our consciousness by the external world, or in a pre-established harmony of both, matters not. We take our stand, then, upon the admitted facts of popular belief. Here are feelings, sequences of feelings, thoughts, trains of thought, systems of scientific belief: all internal facts. Beyond the consciousness of these internal facts stretches (so we now assume, and only assume) another world of facts, in which something corresponds to each one of these feelings, some order of facts to each sequence of feeling, some system of facts and of laws to each properly constituted system of beliefs. The external order of the world beyond corresponds to the order of this internal world of our consciousness, but is not this order. A plausible hypothesis is required as to the nature of this corresponding external order.

Many hypotheses have been suggested in answer to this requirement. The doctrine previously discussed, the doctrine of "Mind-Stuff," was such an hypothesis. Mind-Stuff was to be like in nature to consciousness; but by reason of the simplicity of its ultimate units, each of these was to be again unlike consciousness. For consciousness, it was assumed, is an aggregate of units; each unit by itself has only intensive quality, and, lacking complexity of content, is of course unconscious. Our consciousness, then, is employed in mirroring the complex relations in which the unconscious Mind-Stuff elements outside of us are involved. The usefulness of this hypothesis we have previously tested. But the motives that led to its formation are interesting. These motives were, one may fancy, twofold. There was the influence of Berkeley's argument, reiterated as it has been in so many forms. According to this argument, external reality can be consistently conceived only by assimilating it in nature to consciousness. The second motive was the expressed one of formulating in simple terms the phenomena of

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evolution and of physiological psychology. The transition from the material to the conscious, the connexion of the psychical with the physical, could best be conceived by supposing the physical to be but a disguised or attenuated or very simple form of the psychical. The first motive, if it was really very active, we have decided to omit for the moment from consideration. The second and more expressly prominent motive we should consider responsible for the most faulty part of the theory, *viz.*, the undefined double-sided nature of these hybrid Mind-Stuff atoms, the fact that they try to appear among old-fashioned atoms as being quite dead enough for all the purpose of mechanics, while they show their ghostly selves at the gates of psychology, and in very thin voices, with very uncanny behaviour, try to convince us that they are after all really quite alive, and quite ready to take part in the building up of conscious mind.

The Mind-Stuff hypothesis lands us in a dilemma. Either our elementary atoms are as dead as those of Democritus; and then the whole problem of the evolution and the physiology of mind is unsolved: or they have such mental life that out of them complex consciousness can be built up; but then they are Monads, minds of more or less clear consciousness. And in that case, following the reasoning by which the Mind-Stuff theory itself was reached, we are led naturally to the hypothesis that every atom of matter is a little mind; not an intensive element of sensation, but a complex of many elements in a conscious unity of some sort, an apperceptive individual.

To such an hypothesis, be it noticed, we are led only when we accept the method and the premisses that led to the hypothesis of Mind-Stuff, and when we free the conclusion from ambiguity. But the hypothesis in question—that for which the atoms are little conscious souls, with a life of their own, like our human lives, only simpler—will hardly meet very soon with general favour. It is in fact complex and not plausible. And why? Though really better than the Mind-Stuff hypothesis, this other is unacceptable, because it asks us to assume the existence of a conscious reacting thinking being, where no symptom of reaction or of thought or of consciousness appears beyond the simple behaviour of an atom in the presence of other atoms. Better is this hypothesis, that is, more consistent and adequate than the Mind-Stuff hypothesis, because we can form some idea of how a Monad can exist, can enter into relations with other like Monads, can unfold itself, can even, under favourable conditions, develop into a higher order of being, become the theatre of a rational conscious life; while we can form no notion of complex interrelations among absolutely

simple and purely intensive sensation-elements, nor conceive how out of them a complex and united consciousness can be formed. But unsatisfactory is this hypothesis, because we are unwilling to admit a definite conscious life, individual and volitional like our own, unless we see some symptom of life and of volition more marked than an atom has yet shown. Above all, the mark of action with a purpose seems wanting in the case of an atom, whose velocity or whose combination with other atoms is not a reaction determined by any discoverable inner purpose, but simply the result of surrounding conditions modified by the simple nature of the atom. Arbitrary then and confounded seems the hypothesis of any definitely conscious Monad-atoms; for to explain the facts of experience such an hypothesis assumes a whole world of unknown and unknowable facts, *viz.*, the inner life and thought of what seem to us dead atoms. Yet, if arbitrary, the hypothesis is irrefutable. It is, as said, preferable to the Mind-Stuff doctrine; and its consistency, not to mention its poetic charm, will always keep it on the verge of speculative thought, recognised by a fanciful few, and ignored or despised by the common-sense many.

But have we exhausted the possible hypotheses as to the external foundation of the phenomena of experience? By no means. We must indeed pass over those for which the external world is the embodiment of an "Unconscious Mind"; and that simply because we shall look in vain among the volumes of glib writing upon this topic for any clear notion of what people mean by "unconscious mind". If by "unconscious mind" is meant what is generally called matter, we remain just where we were at the outset, with an inquiry before us as to what is the nature of the external fact to which corresponds our idea of matter. But if "unconscious mind" means aught else, then the term seems to be equivalent to "unconscious consciousness". For no idea of a reason or of a thought can be formed in such wise as to separate reason and thought from consciousness. Thought is a series of active conscious states; and all the ingenuity of generations of Von Hartmanns shall not induce us to corrupt our speculation with the monstrous marriages of contradictory notions whereof the "Philosophy of the Unconscious" seems so proud. Yet thus we are not done with hypotheses. Nor are we forced to go back to the vague and uncritical hypothesis that only matter, indefinable inexplicable matter, exists outside of our minds. Of the existence of matter we can give hypothetically some little account. At all events there is Berkeley's hypothesis, which as a mere hypothesis we can examine apart from any study of Berkeley's philosophical arguments for his idealism.

According to Berkeley there exist conscious beings, more or less like ourselves, of whom the head and father is God. Now external to all beings besides God there is a real world. This real world is made up of the eternal system of God's thoughts.

"When I deny sensible things an existence out of the mind, I do not mean my mind in particular, but all minds. Now it is plain they have an existence exterior to my mind, since I find them by experience to be independent of it. There is therefore some other mind wherein they exist, during the intervals between the times of my perceiving them ; as likewise they did before my birth, and would do after my supposed annihilation. And as the same is true with regard to all other finite created spirits, it necessarily follows, there is an *Omnipresent Eternal Mind*, which knows and comprehends all things, and exhibits them to our view in such a manner, and according to such rules as he himself hath ordained, and are by us termed the *laws of nature*" (*Dialogues between Hylas & Philonous*, III).

This so familiar hypothesis of Berkeley is in part founded upon a thought that for the present we have agreed to neglect, *i.e.*, upon the notion of the external world as the *cause* of our internal impressions. Not being caused by myself, my ideas, reasons Berkeley, must have an external cause. And the only intelligible cause is an active spirit. Yet for our present purpose this thought is not important. We are not asking about the cause of our conscious states, but about the way in which we can most plausibly conceive of an external world corresponding to these states. The correspondence is assumed. Into its ground, be it pre-established harmony or physical influence, we do not just now inquire. Our only criteria of plausibility, causal explanation being dropped, are therefore adequacy, simplicity, and consistency. Is Berkeley's hypothesis consistent with itself, and is it the simplest hypothesis possible? Stripped of non-essential features, the hypothesis is that there corresponds to our consciousness another higher and farther-reaching consciousness, containing all that is abiding in our consciousness, and much more besides. This consciousness is in form and matter a rational spirit, having definite purposes in the creation and education of the various finite spirits. These purposes require for their accomplishment that our conscious states should within certain limits agree with this higher consciousness, correspond to it in form and to a certain extent. This correspondence constitutes what we mean by truth. There is no external world but this other consciousness.

To Berkeley, as we know, the essential part of this doctrine was the teleological part. That God's thoughts and our correspondence thereto result from and express God's purposes in creating the world, this was for Berkeley the main point to be proven. But if the theological element of the doctrine be for

the first left out of account, there is another part that we just now wish to hold fast. *Our thought is true by reason of its correspondence to the facts of an actual consciousness, external to our own*: this hypothesis has an interest apart from its origin and from its original use. Why in philosophy should we be afraid of doctrines because they have an association with some dreaded theological dogma, or with some enthusiastic and over-confident system of the past? About the nature of the external world we have at the outset nothing but hypotheses. Before we test them in any very exact way, we may with safety try to understand them. Perhaps what seemed the wildest of them all may turn out to be the very best. Because a certain hypothesis was put forward rather as a demonstrable and eternal truth than as an hypothesis, shall we reject it without further examination?

The hypothesis now before us is Berkeley's with the teleological element omitted, along with the causal. How this external consciousness comes to affect us, and why it takes just such forms as it does, we care not. This we ask: What is this supposed external consciousness? How does it correspond to our own? We shall not call the supposed consciousness by question-begging names. It is not for us just now either absolute or divine. It is simply consciousness, and external. The hypothesis is that truth consists in some kind of correspondence between our thought and this outer reality. What kind of correspondence?

Two conscious beings can have corresponding states of consciousness, without having like states. The notes of a melody could have corresponding to them the variations in intensity of some source of light. The light-flashes or beats would correspond to the notes of music by having the like rhythm; yet there would be no resemblance in the content. Correspondence may be yet more obscured. The dashes on a piece of paper that has passed under the point of a telegraphic pen, the series of characters printed from the press in a dozen languages, the sounds of the voice of a reader, the series of signals flashed from shore to a distant vessel, all these dissimilar series of events might correspond exactly and throughout, if it were their purpose to convey in various ways the same meaning. In order, then, that my consciousness should correspond to some other consciousness, external to mine, it is only necessary that for each event or fact in my consciousness there should exist some event or fact in the other consciousness, and that some relation existing among my conscious states should be like or parallel to the relation existing among the conscious states external to mine. The more numerous the points of resemblance between

the two series of states, the closer the correspondence. But correspondence in the abstract implies only some one definite and permanent resemblance found throughout the two series.

Such being the nature of correspondence in general, let us consider our hypothesis more in detail. Suppose that the clock yonder has some such reality as this hypothesis supposes. There is the clock, with its pendulum beating. For me now that clock is a combination of sensations, joined with a belief in certain possible sensations. For one in the same room with me, the clock has a like existence. But suppose that the clock has, apart from my consciousness, apart from the consciousness of any other human being or animal, an existence for some other, as yet undefined consciousness. Suppose that for this consciousness the clock in its whole present condition exists, not at all as a "possibility of sensations," but solely and in all its parts as a present group of sensible facts, standing in definite relations. Suppose that the sensible facts that constitute this clock as it is given to this hypothetical consciousness are in quality unlike the sensations that for me constitute the clock; but that in their relations, in their number, in their grouping, in their differences from one another, these sensible facts as they are for the hypothetical consciousness agree with the sensations and with the "possibilities of sensation" that for me constitute the clock. Suppose that the clock as it is in the hypothetical consciousness endures for a considerable time, and is called the real clock. Then when I shut my eyes or go away or die, there exists still the real clock, *i.e.*, the clock in the hypothetical consciousness. Though all my fellows die there is still the real clock, independent of our consciousness. The clock may for a time go on running; that is, in the hypothetical consciousness there may be a rhythm of sensible events, corresponding to what for me, were I present, would be the rhythm of the pendulum-beats and the movement of the hands.

Now suppose this hypothetical consciousness extended, so that it contains facts corresponding to my ideas of the ether-vibrations that fall upon or that are reflected from the face of this clock. Suppose that it further contains facts corresponding to each of my ideas of the relative position of this clock and of other objects. Suppose at last that the hypothetical consciousness is extended to all the facts of what I call my universe of actual and of possible sensation. Suppose that each possible or actual experience of each moment in my life or in the life of any other animal is represented by some actual momentarily present fact in the hypothetical consciousness. Then consider the hypothetical consciousness at any moment, and see what it will contain. Every material atom, every wave of ether, every

point of space, every configuration of material bodies, every possible geometrical relation, will be represented in the hypothetical consciousness by some definite fact. The relations of these facts will be in nature and in complexity similar to the relations among the facts of my actual or possible sensations. On the other hand, the limits of my possible consciousness at any moment will be the limits of the actual consciousness of this supposed universal Knowing One. What it actually knows, I conceivably might now know. If it is conscious of a certain series of facts, then I might be conscious, were I now on the other side of the moon, of living creatures there. If the hypothetical consciousness contains another set of facts, then I might be unable to find such living beings were I there. And so with all facts of possible experience.

We can easily see how, under this supposition, conformity to the supposed universal consciousness will become on my part a goal of effort. Knowledge of possible experiences is useful to me. But all possible experiences are or will be actual in the hypothetical consciousness. If I am standing near a concealed pit-fall, or am in danger of a blow, or in danger of death from poison, that fact, translated into ultimate terms, means, we may suppose, that in the universal consciousness there is now the knowledge of certain relative positions and motions of atoms. The sequence of states in the universal consciousness must be supposed to be a regular sequence, subject to fixed law. But sequence does not now especially concern us; since we speak only of the nature of this external consciousness. It is enough, therefore, to point out that this supposed universal knowing consciousness, this "Not-Ourselves," has, under the conditions stated, all the essential characteristics of a real world. It is beyond us; it is independent of us; its facts have a certain correspondence to our sensations. Under the supposition that by nature we tend to be in agreement with this consciousness, progress in the definiteness and extent of our agreement with it may be both possible and practically useful. This agreement would constitute truth. No other real world need be supposed behind or above this consciousness. Rejection of an old theory and acceptance of a new, as when the Copernican doctrine replaces the Ptolemaic, will mean the growth of a belief that the new system of ideas corresponds more nearly than the old, not with dead matter, but with the sequence of states in the universal consciousness. The universal consciousness itself will be no illusory consciousness. It will not need a further consciousness to support it. It will need no dead matter outside of it. Our nature leads us to look up to it as to our model. Itself is the pattern, looking up to no other model. The purpose of thought

will be conformity with this perfect, untrammelled thought. For us there is a little range of actual sensation, in the midst of a vast ocean of possible sensation. For the universal consciousness there are at any moment only actual data. We see the clock-face; and for us the inside of the clock is possible sensation only. For the supposed consciousness the inside will be as much present as the outside. For us colours and odours suggest possible sensations, which science interprets as being in the last analysis the possible sensations known as atoms, motions, velocities, distances. For the universal consciousness, these atoms, motions, velocities, and distances, or the ultimate facts to which these notions correspond, are not possible but actual data. There need be then, in the last analysis, no dead unconscious atoms, nor yet unconscious little atom-souls, striving, fighting, loving, uniting; there need be in the last analysis only a consciousness of facts corresponding to what we mean by motion, velocity, extension, distance, impenetrability. Corresponding to the relation $a : b$ in our consciousness there will then be the external fact $A : B$, whereof so much is supposed to be known: first, that the relation $a : b$ is somewhat like the relation $A : B$; secondly, that the terms A and B , whatever their particular character, are facts for a consciousness, and nothing but facts for a consciousness. And the hypothetical consciousness for which these facts are all present, together with their manifold relations, this we may call a World-Consciousness. An illusion for my consciousness will mean a failure to correspond with the world-consciousness. A truth for my consciousness will be a relation $a : b$ that corresponds with some relation $A : B$ in the world-consciousness. But for the world-consciousness itself there will be no question of its own truth or falsity. It will be for and in itself. It will not have to create a real world, it will be a real world. It will not have a Nature as its own Otherness, over against itself. It will be in its own facts and in their sequence a nature. It will bear no mystical relation to the individual intelligences, as if they were its "emanations" or its "modes". It will be in and for itself, as independent of them as if they were not. They will be self-existent, devoid of any such unreality as the mystics like to give them. But their whole business and purpose will be to carry out and to make full and definite that correspondence with this universal consciousness upon which their existence and their peace depend. A certain lack of correspondence with the universal consciousness on the part of any animal's ideas will be followed by the cessation of that particular grouping of facts in the universal consciousness that is known to us as this animal's body. With the dissolution of this animal's body will

cease his consciousness, his chance of disagreeing in his states with the states of the universal consciousness, and therefore his lack of correspondence. An ultimate law of sequence, with which, as with all causal connexion, we have here nothing to do, thus binds the individual beings to the World-Consciousness. The whole universe exhibits the phenomenon, first, of one great consciousness, embracing an infinitude of geometrical, physical, chemical, physiological facts, and, secondly, of a vast multitude of individual conscious beings, whose number and sorts we shall never be able to tell, whose destiny, however, demands of all of them a more or less imperfect likeness between their states and the relations thereof on the one hand, and the facts of the universal consciousness on the other hand. The universal consciousness, be it noted, is so called merely as including in its ken all ultimate mathematical and physical facts. Of its nature beyond this we pretend to suppose nothing. And it does not include within itself the individual conscious beings. Our hypothesis is not pantheistic, or theistic. We simply suppose a "Not-Ourselves" that includes all natural knowledge. This is the External Reality.

We have omitted all reference to the teleological element that is generally introduced into any theory of a World-Spirit. So far, in fact, our World-Consciousness is not what people mean by a World-Spirit. A Spirit, "weaving the living robe of Deity," our World-Consciousness is not; for as so far described it does nothing, it merely looks on. It looks at its own states, and these are supposed to be altogether its own, given from no higher source. But as to their succession or their worth, their beginning or their end, we have said nothing. This Consciousness has these states, but we have supposed them to be attended by no emotion of pleasure or of pain, by no modifying reaction of will. This consciousness is not a Creator, it is a Seer. As for the individual conscious beings, it does not make or unmake them by an exercise of power. They, on the contrary, are made and unmade according as there arise or disappear in this universal consciousness certain groups of data that, as represented in our mortal thought, are called organic living bodies, with tissues, motions, structures, functions. These groups pass, and with them the individual consciousness that coexisted with each. This growth and decay is simply a law of experience, an ultimate and inexplicable sequence. But the universal consciousness of nature, for which each of these groups of physical facts existed, that remains. In other words:—Each animal body is represented in the universal consciousness, and exists only in so far as it is represented therein, or is known to its possessor or to other animals. The individual mind that coexists with this

body, has no representative in the universal consciousness, but exists and is real for itself. With the group of facts in the universal consciousness to which, as we say, corresponds our idea of the body, the independent group of facts called the animal's mind lives and dies. The universal consciousness and the individual minds make up together the sum total of reality.

Continuing to mention the consequences of our hypothesis, we see that the well-known questions so often asked of idealists are no longer puzzling when we accept such an idea as the foregoing. Such questions are: What existed before there was any conscious life on the planet? In what sense was there light or heat, matter or motion, before there were eyes to see, tactile organs to feel, animal intelligence to understand these external facts? The question of Kant too about the subjectivity of space would seem to have been answered. Before there were conscious beings on this planet, this planet existed only in and for the universal consciousness. In that consciousness were facts corresponding to all the phenomena, or possibilities of experience, that geological science may declare to have really existed at such a time. When the earth became filled with life, there appeared in the universal consciousness the data known as organisms. And at the same time, beside the universal consciousness, beyond its ken, there arose individual conscious beings, whose states were more or less imperfect copies of the universal consciousness in certain of its facts. Even so, empty space is now existent beyond the borders of finite observation only as a group of states in the world-consciousness. Space is subjective, belonging to the states of the universal consciousness; and yet to us objective, since in thinking it we merely conform ourselves to the universal consciousness. But the consequences of our hypothesis are numberless. Enough has been said of them for the present purpose.

Wild and airy indeed! But why so? Mind-Stuff was a worse hypothesis, because, when you tried to express all its consequences, it became unintelligible. The ordinary uncritical Atomism is a worse hypothesis, because we never get from it the least notion of how this eternally existent matter may look and feel when nobody sees or feels it. The mystical "one substance with two faces" is worse, because that is no hypothesis, only a heap of words. Schopenhauer's *Wille* is worse, because it is only a metaphor. The hypothesis that ascribes to the atoms independent life and volition is no more adequate than our hypothesis, and much less simple. The old-fashioned pantheistic *Welt-Geist* of Schelling and of the romantic philosophy generally is more poetical than our hypothesis, but yet worse for all that; for no one ever comes to understand how this One Spirit is re-

lated to the many individual minds. They are parts of him, or else apart from him. In the one case their invincible confidence that they really exist and are not "things in his dream," is unfounded; in the other case his all-embracing unity is destroyed. In our hypothesis nothing is wonderful but the one miracle of a series of orderly conscious states, following through all time according to fixed laws. Beyond that all is clear. That there should be a consciousness containing ideas of all material relations, is no harder to believe than it is to believe in the ordinary unintelligible world of atoms. That beside this consciousness and in fixed relation to its facts there should exist a great number of different series of conscious states, each series being called an individual, this is no harder to believe than are the ordinary facts of nervous physiology. In reality this hypothesis gives us a simple expression, easily intelligible, for all the facts and laws of physics, of nervous physiology, and of consciousness. Take, as a final example, the man looking at the candle. In the world-consciousness there is the group of states $c, c', c'' \dots$. That is the real candle. In the world-consciousness there is also the group of states $h, h', h'' \dots$. That is the "cerebral image" of the candle, a physiological fact. Finally, according to the laws of reality, the existence in the world-consciousness of the facts $h, h', h'' \dots$ grouped as they are, has co-existent with it the group of ideas C in the man's mind. This group C corresponds more or less completely to the group $c, c', c'' \dots$ as that group exists beyond the man's mind, in the world-consciousness. The group C is the man's idea of the candle. Such is our hypothesis in a nut-shell. We urge for the moment only this in its favour: that it is simple, intelligible, plausible. After all it is but an hypothesis.

II.

But of what use all these hypotheses? They are not philosophy, but at best merely the scaffolding of philosophy. Ontology is play. Theory of Knowledge alone is work. Ontology is the child blowing soap-bubbles. Philosophical analysis is the miner digging for gold. And yet not quite that is ontology. Not all play this occupation of mankind for so many centuries. Ontology, to speak quite carefully about it, is not philosophy, but an education of the philosophic spirit. Had we but the foregoing hypothesis to offer, this article should never have been written. We have suggested and developed the hypothesis merely that in a pure and somewhat simple form we might express the nature of human thought about reality. This nature of thought once grasped, our hypothesis about

reality will become transformed into a philosophical theory of reality. A dogmatic statement prepares us for a critical analysis.

The first impression of one that has fairly comprehended the foregoing hypothesis as to the nature of reality will be that, if an "idealistic" hypothesis, this one is at all events as ethically unsatisfactory as the coldest materialism. Of the aims, of the will, of the worth of this universal consciousness we have been able to say nothing. It was not a Spirit. It was not a product of human desire. It was the material world simply transformed into ideas. All the cold and deadness of inexplicable eternal law in the succession of phenomena was there, unrelieved by any trace of an emotional element. It was mind, but inhuman mind, recalling the address to the "Todesgötter" in Schiller's *Jungfrau* :—

"Bei euch dort unten in der ew'gen Nacht,
Da schlägt kein Herz mehr, da ist alles ewig,
Steht alles unbeweglich fest."

This fact is noticed to ward off the suspicion of any ulterior designs hidden by this our hypothesis. The meaning of the fact may appear before we finish. But now to the philosophic task of testing our hypothesis.

Every belief about an external world is an active assumption or acknowledgment of something more than the data of our consciousness. What is directly given in consciousness is not external. All direct data are internal facts; and in the strictest sense all data are direct. Suppose a merely passive acceptance of what is in consciousness, and you have no belief in an external world. An addition to the data of consciousness, a more or less clearly voluntary reaction, is necessary to the idea of external reality. The truth of this principle appears when our belief in any particular external thing is called in question. I hold that I see yonder a snowy mountain. My companion insists that beyond the wide misty valley there is to be seen only a grey cloud. I reassert my belief, and in the reassertion feel more definitely than at first the active addition of my own belief to the meagre data of sense. The addition existed, however, in my first assertion. Or again, one man is trying, perchance in sport, to make another doubt the existence of material objects. "There is no external reality," says the first. "There are but these states of consciousness in our minds. Nothing beyond them corresponds to them." The second, maintaining the position of the man of common-sense, retorts sharply :—"Doubtless I cannot refute altogether your fine-spun arguments; but they are nevertheless nonsense. For I persist in believing in this world of sense. I live in it, I work for it, my fellows believe in it, our hearts are bound up in it, our success depends upon our

faith. Only dreamers doubt it. I am not a dreamer. Here is a stone; I hit it. Here is a precipice; I fear and shun it. My strongest conviction is concerned with the existence of this world of sense. Do your worst; I am not afraid of talk." Thus then by every device of the active spirit, by reminding himself of his most cherished interests, of his affections and hatreds, by arousing his social sentiments, by bodily acts, the practical man preserves himself from fantastical speculation. When better-trained thinkers call the belief in an external reality "a natural conviction, to be retained until we are compelled to abandon it," or "a convenient working hypothesis, to be received on the testimony of consciousness, testimony assumed to be trustworthy until the opposite is proven," what are these but similar practical considerations, appeals to the will? Concerning data of immediate consciousness such remarks would be wholly out of place. That I see a certain colour at this moment is not a "convenient working hypothesis". Is consciousness merely a "presumably trustworthy witness" when it testifies to the pangs of toothache? Nobody could balance evidence as to the reality of his sensation *quâ* sensation when consciousness is filled with the sound of a street-organ. Sound, colour, pang, these are data, not merely things believed in. But the external world—that is actively accepted as being symbolised or indicated by the present consciousness, not as being given in the present consciousness.

In short, every assertion of an external world, being an assertion of something beyond the present data of consciousness, must spring from an activity of judgment that does more than merely reduce present data to order. Such an assertion must be an active construction of non-data. We do not receive in our senses, but we posit through our judgment, whatever external world there may for us be.

All theories, all hypotheses as to the external world ought to face this ultimate fact of thought. If the history of popular speculation on these topics could be written, how much of cowardice and shuffling would be found in the behaviour of the natural mind before the ultimate question: "How dost thou know of an external reality?" Instead of simply and plainly answering: "I know the external world only as something that I accept or demand, that I posit, postulate, actively construct on the basis of sense-data," the natural man gives us all kinds of vague compromise answers: "I believe in the external reality with a reasonable degree of confidence; the experience of mankind renders the existence of external reality ever more and more probable; the Creator cannot have intended to deceive us; it is unnatural to doubt as to external reality; only young

people and fantastic persons doubt the existence of the external world; no man in his senses doubts the external reality of the world; science would be impossible were there no external world; morality is undermined by doubts as to the external world; the immovable confidence that we all have in the principle of causality implies the fixity of our belief in an external cause of our sensations". Where shall these endless turnings and twistings have an end? The habits of the law-courts as condensed into "rules of evidence," the traditional rules of debate, the fashion of appealing to the "good sense" of honourable gentlemen opposite, the motives of shame and fear, the dread of being called "fantastical," Philistine desire to think with the majority, Philistine terror of all revolutionary suggestions, the fright or the anger of a man at finding some metaphysician trying to question what seem to be the foundations upon which one's breadwinning depends: all these lesser motives are appealed to, and the one ultimate motive is neglected. The ultimate motive is the will to have an external world. Whatever consciousness contains, reason will persist in spontaneously adding the thought: "But there shall be something beyond this". The beyond can never be proven, because never verified. Verification is transformation of non-data into data. The external reality as such (*e.g.*, the space beyond the farthest star, any space not accessible, even whatever is not at any moment given in so far as it is viewed from that moment, in particular every past event) is never a datum. But the very nature of the postulate of external reality both forbids and renders needless the actual verification. We construct but do not receive the external reality. The "immovable certainty" is not such a dead passive certainty as that with which we receive a pain or an electric shock. The certainty of an external world is the fixed determination to make one, now and henceforth.

But we make, be it noticed, only when we have material with which to make. The sense-datum at any time suggests what external reality we shall at that moment conceive. But without the spontaneity the sense-datum would be no indication to us of an external fact. This being the general truth, there arises the special question, so often discussed: What relation does the external reality bear to the sense-datum? Do we conceive this external reality as being primarily the cause of our consciousness, or as being primarily the external counterpart of consciousness? If the first, the external reality need not resemble consciousness; if the second, this reality must be conceived as resembling consciousness.

Modern thought seems at first sight to have decided this

question once for all. The ether-waves that cause but that do not resemble colour-sensations, the molecular vibrations that have no likeness to the feeling of heat, seem decisive of the whole matter. But if these instances indicate a disposition to regard external reality as the cause of consciousness, and as therefore possibly wholly unlike consciousness, they also equally indicate a disposition to regard our thoughts as destined to copy more or less perfectly an external reality. I have a sensation *a*, supposed to be caused by the wholly unlike molecular vibration *V*. But of the external fact *V* I have an idea *v*. And this idea is supposed to resemble the external thing. *V* is not the direct cause of *v*, but only of *a*. Yet *V* resembles *v*. The resemblance of *v* and *V*—is that known through the postulate of causality?

Doubtless the answer will be made that the resemblance of *v* and *V* is known or believed by means of a course of reasoning that throughout depends on the postulate of causality. "If," some one may say, "I assumed no external cause for *a*, I should never reach the idea of this cause as being the particular group of molecular vibrations or of ether-waves known to me as *V*, and conceived by means of the idea *v*." But, on the other hand, we may rejoin, if I conceived of the external reality solely as the cause of *a*, not as having any necessary likeness to any idea that I might form, how should I ever render definite my idea of the cause of *a*? The external reality would remain what it was at the outset, an unknown postulated cause of our conscious states. No labour would ever make it knowable. At every step of the process by which I proceed, from the sensation *a* to the definite idea *v* of its cause *V*, I depend for my progress on the assurance that external reality is with me, not merely as the unknown cause, but as the counterpart of my conscious states. This whole process involves, for example, constant accumulation, classing and sifting of experiences. Any text-book on Heat, on Optics, on Physiological Psychology, will illustrate sufficiently what is meant. But how is the accumulation of experiences possible? Only through constant backward reference in consciousness, and so only through constant assumption that present conceptions are adequate representatives of past experience. Now, if we are serious with ourselves, we shall find that truly past experiences, of whatever kind, are as much truly external facts, when viewed from the present moment, as are the sodium and hydrogen in the sun, or the buttons on our neighbour's coat. The past is not a present datum, otherwise it would not be past, but present. The past is postulated as an external reality. Now this or that past event is indeed a cause of my present consciousness of some event; but my confidence that

there has actually been a series of past events is not a judgment of causality. I believe in a past as I believe in a future, not to satisfy my faith in the principle of causality, but to satisfy my tendency to postulate an indefinite time-stream, like in nature to my present succession of immediately given states. I believe in a real time, not primarily as the cause but as the counterpart of my notion of time. How otherwise shall I form the idea of a cause at all, unless I have already assumed the reality of time? A cause for my belief in the past is to be conceived, if at all, only as already a past fact. The conception that it is to create is a condition of its own existence, unless indeed one has admitted what we wish admitted, that, however the case may be with the belief in any one past fact, the belief in past reality as such is prior to our belief that our present state has been caused by the past. But the same priority of the belief in some agreement between my idea and the external reality, is found in all departments of thought. A material cause of my experience is a cause in space. But, however I came by the idea of space, my present belief in the reality of space precedes any particular belief in a material cause for a particular sensation, and renders the latter belief possible. The conception of reality furnished by the search for causes is thus always subordinate to the conception of reality furnished by our first postulate. This first postulate is, that our ideas have something beyond them and like them. So at each moment of my life I postulate a past and future of my own, like my present consciousness, but external thereto. So my social consciousness, my original unreflective tendency to work with and for other beings, implies the postulate of the external existence of my fellow-men, like myself and like my ideas of them. So to the present intuition of the space in the retinal field or at my finger tips I join the postulate of an infinitely extended not perceived space, like the perceived space, and like my space-ideas.

The external reality conceived by us is therefore conceived through a spontaneous reaction of the receiving consciousness in presence of the sense-data received. The forms of this reaction it is the purpose of the Critical Philosophy to define. The task set by Kant has not yet been accomplished. But the fact of some reaction seems established. And the general law of the process seems to be that the external reality is conceived after the pattern of the present data, with such modification as is necessary to bring the conception into harmony with already established habits of thought, and with the conceived results of previous experience. The aim of the whole process seems to be to reach as complete and united a conception of reality as is possible, a conception wherein the greatest fulness of data shall

be combined with the greatest simplicity of conception. The effort of consciousness seems to be to combine the greatest richness of content with the greatest definiteness of organisation.

This character of our activity in forming our notion of reality implies the subordination of the causal postulate to other motives. In the scientific field the postulate of Causality is predominant, because there the notion of a world of uniform sequences in time and in space has been already postulated, and what remains is to fill out the picture by discovering the particular sequences. But if I try to banish altogether from my notion of external reality the idea that it is an adequate counterpart of my subjective states of consciousness, what will remain? Simply the notion of an utterly unknowable external cause of my sensations. Of this nothing will be said, but that it is. Science, experience, serious reflection about reality will utterly cease. I shall have remaining a kind of Disfigured Realism, where the real will be an unknowable, as unreal as possible. But reintroduce the omitted postulate, admit that reality is conceived as the counterpart of consciousness, and then the principle of causality can be fruitfully applied. Then indeed experience may lead us to conceive the external reality as unlike this or that suggestive sensation, unlike this or that provisional idea. But we shall be led to new conceptions, and shall be able to make definite progress, so long as we postulate some sort of Likeness between inner and outer.

In brief, as causality means uniform sequence, the acceptance of any causal relation as real involves a conception of the uniform sequence that is to be accepted. When finally accepted, the sequence in question is conceived as a real fact, wholly or partially external to present consciousness, but like our present idea of itself. Causal sequence cannot therefore be placed first, as giving us a totally undefined notion of an external reality; but second, as enabling us to develop in detail the idea that reality is like our own states of consciousness. Of course to prove by actual verification that the external reality is like our states of consciousness, this we can never accomplish. But from the outset we have seen that verification is in this field impossible. The whole of external reality, past, present, future, all that is outside of what one now sees and feels, all space, time, matter, motion, life beyond this immediate experience,—all that is for each one a postulate, a demand, an assertion, never a datum, never as a whole verifiable. Since we believe in this external reality, if experience suggests with sufficient force the idea that some causal sequence is real, our postulate that such suggestions have their counterpart in an external world leads us to regard the conceived causal sequence as an externally real

fact. Not however do we first conceive of the external reality as cause, and then in the second place only find it to be or not to be the counterpart of present consciousness. All our thinking is based on the postulate that the external reality is a counterpart and not merely a cause. If with time, we drop anthropomorphic conceptions of external reality, we do so only because, in the presence of a larger and fuller experience, we no longer find old conceptions, founded largely on lower forms of emotion and on narrower experience, adequate to our notion of the external counterpart of consciousness. For demons and entities we substitute atoms and etherial media, not because we abandon the position that external reality resembles our ideas, but because wider experience is found to be best reduced to unity by the latter, not by the former ideas. The atoms and the media are themselves only provisional notions, since more experience may be better reduced to unity, for all we yet know, by some other ideas. But throughout remains the postulate: external reality is somewhat like our ideas of its nature.

We have been betrayed by the doctrine that we have combated into forms of speech that do not adequately express the Critical notion of reality. We hasten to complete our conception by adding the omitted elements. External reality is like our conceptions of it: so much, we have seen, is universally postulated (postulated, be it noticed, not directly experienced, not forced upon us from without). But the kind of likeness still remains to be defined. Can the external reality be conceived as being, although in nature like our conscious states, yet in no necessary relation to consciousness, as being neither a consciousness nor for a consciousness? The answer is the whole struggle of idealistic thought, the whole progress of philosophical analysis in modern times. One cannot go over the field again and again for ever. The state of the controversy can be roughly stated thus:—When the notion of external reality is based solely upon the application of the notion of causality, all degrees of likeness or unlikeness between thought and things are assumed, according to the tastes of individual thinkers. External reality is once for all absolved from the condition of being intelligible, and becomes capable of being anything you please, a dead atom, an electric fluid, a ghost, a devil, an Unknowable. But if the subordinate character of this postulate of causality is once understood, the conception of reality is altered. What is real must be not only vaguely correspondent to an ill-defined postulate, but in a definite relation of likeness to my present consciousness. That this is the actual postulate of human thought is shown by those systems themselves that ignore the postulate of likeness, and has been illustrated in the foregoing. But what forms does

this postulated likeness take? For the first, the postulated likeness between my idea and the external reality may be a likeness between my present conscious state and a past or future state of my own, or between this present state and the conscious state of another being. The whole social consciousness implies the postulate of a likeness between my ideas and an actual consciousness external to mine, fashioned in my own image. But the second generally recognised form in which the postulate of the likeness of internal and external appears, is the form according to which I postulate that a present idea of my own is not like one of my own past or future states, not like any actual past or future state in another being of my own kind, but like a possible experience. That our ideas can adequately express possibilities of sensation that are actually never realised, either in ourselves or in any other known creature, this is a familiar postulate of natural science. The laws of nature are generally, as is admitted by all, what Lewes called "ideal constructions," expressing experiences for us never realised, but permanently possible. And so extended is the use of the concept of possible experience, that, as we know, Mill in one of his most interesting chapters, gave "permanent possibility of sensation" as an adequate definition of matter.

Now the position of modern phenomenism is, that by these two postulates or forms of the one postulate of Likeness, the whole notion of external reality is exhausted.

The external world means, according to this position, the possible and actual present, past, and future content of consciousness for all beings. And this result of modern phenomenism we accept. As for the detailed proof, we cannot go over that well-beaten battle-field here. More or less purely the position is maintained by the whole army of modern idealists. The position is maintained in Fichte's *Bestimmung des Menschen* and other shorter philosophic essays (less clearly, we think, though much more at length, in the two larger expositions of the *Wissenschaftslehre*), in the Hegelian *Phänomenologie*, in Schopenhauer's *Welt als Wille und Vorstellung*, in Ferrier's *Institutes of Metaphysic*, in J. S. Mill's *Examination of Hamilton*, in Mr. Shadworth Hodgson's *Time and Space and Philosophy of Reflection*, in M. Renouvier's *Logique Générale*, in lesser books innumerable, e.g., in Prof. Baumann's *Philosophie als Orientirung über die Welt* (in the first chapter), in Prof. Schuppe's *Erkenntnisstheoretische Logik*, in Prof. Bergmann's *Reine Logik*. Not of course that all this multitude of thinkers, different in method, in ability, in aim, in everything but in the fact that they are post-Kantian idealists, would accept the foregoing statement as a fairly complete account of their doctrines. Some of them would laugh at the

simplicity of our terms. But, we maintain, in substance they all agree about one fundamental truth, *viz.*, that thought, when it inquires into its own meaning, can never rest satisfied with any idea of external reality that makes such reality other than a datum of consciousness, and so material for thought. Sensualism and the most transcendent *a priori* speculation agree in coming at last to flee in ceaseless unrest from every support for an external reality that may seem to offer itself beyond the bounds of consciousness. This phenomenism of post-Kantian speculation we accept.

All external reality is then postulated as being not merely like conscious data, but in truth an actual or a possible datum of some present, past, or future consciousness. But there remains in this definition of the postulate still one obscure point. What is meant by possible consciousness? What can there be for consciousness beyond the grand total of all actual past and future states of consciousness in all beings? For what purpose and by what right shall we build a world of possibility above or beside the world of actual experience? This question seems too little appreciated and too much evaded by most thinkers. When Mill called matter a "permanent possibility of sensation," he left room open for the puzzling question: But what is this creature called a possibility? Is it an actual fact? Then what actual fact? If not actual, then in being a mere possibility matter is non-existent.

This scholastic character of the abstract noun "possibility" was remarked and criticised by Prof. Max Müller in an article in MIND III.¹ We shall not find in most writers on this subject less scholastic or better defined terms for naming the same aspect of the postulate of external reality. In fact, if we suppose that one surveys the whole range of actual consciousness, past, present, and future, and postulates no facts that are not for and in consciousness, it is difficult to see what will be the meaning of any added "possible reality". Possible, for the first, is anything that one conceives, in so far as one conceives it at all. I could possibly have wings and a long tail, an hundred eyes, and a mountain of gold. All that is possible, but in what sense? In this sense, that I do actually imagine myself as possessing these things. "Empty possibilities," or "im-

¹ P. 347: "If therefore Mill and his followers imagine that by defining Matter as the permanent possibility of sensation, and Mind as the permanent possibility of feeling, they have removed the difficulty of Kant's *Ding an sich*, they are mistaken. Their possibility of sensation, if properly analysed, means things or substances which can become objects of sensation." Prof. Müller's result is not one that we can wholly accept; his criticism of the word possibility is important.

aginations as one would," are facts of consciousness in so far forth as they are imagined; and they have no other existence. The world of truth is not enriched by these possibilities, whose whole existence is in the actual conscious idea of them. But not in this sense is it matter to be a "permanent possibility of sensation". The icebergs in the polar seas are to be real, not in so far as I now imagine them, but in so far as there exists or holds good the law, that were I present, I should see them, were I to touch them I should feel them, and that both seeing and feeling would be determined in certain ways beyond the control of my will. The pages of that closed book, the bones inside the body of that cat, my own brain, the molecules of the oxygen that I am breathing, all these, in so far as they are not now actually in any consciousness, are to be still real as "possible experiences". But what kind of unreal reality is this potential actuality?

If we inquire into the motive that leads us to postulate these possible experiences, we shall find it to be at least in part the effort to apply the postulate of uniformity to our confused actual experience. Our actual experience is not always governed by obvious laws of regular sequence. But in postulating consciousness beyond our own immediate data we are led, by a certain prejudice in favour of unity and simplicity, to postulate that the real successions of facts are uniform, whatever may be the case with the fragments of reality that fall within our individual experience. I see an apple fall, and no more than that. But I postulate that if I could have had experience of all the facts, I should have observed a series of material changes in the twig on which the apple hung, that would have sufficed to restore the broken uniformity and continuity of my experiences. In this way it is that, as remarked above, the conception of causal sequence does not create, but organises and perfects our notion of external reality. There is something beyond our experience, *viz.*, another experience: that is the first postulate. Experiences form an uniform and regular whole of laws of sequence. That is the other postulate, subordinate to the first. This postulate helps to form for us our idea of the material world beyond individual consciousness; an idea that science accepts for its uniformity, without inquiring further into its nature, while a more critical reflection declares that the facts assumed as existent beyond the range of individual conscious beings are "possible experiences".

If we try to express the nature of this assumption of "possible experiences," we must therefore take account of the fact that they are assumed to satisfy the secondary and subordinate postulate of uniformity, by filling up the breaks and gaps in the postulated actual experiences of ourselves and of our fellow-

beings. They lead us therefore to the conception of one uniform absolute experience. This absolute experience, to which all facts would exhibit themselves in their connexion as uniformly subject to fixed law, is conceived as "possible". But once again, what does that mean? Is the meaning only the empty tautology that if all the gaps and irregularities of individual experience were got rid of by means of connecting links and additional experiences, these gaps and irregularities would disappear? Is the meaning only this, that if there were an absolute experience of an absolutely regular series of facts, this experience would be absolute and uniform? Or again, is it enough to say that any possible experience, an iceberg in the polar sea, my brain, the inside of yonder book, exists for me only as "my representation"? Of course, I know of it only what I conceive of it, yet I postulate that it has some reality beyond my representation. This postulate is for us in this discussion an ultimate fact of which we want to know, not the justification (for there is none higher than the fact itself of the postulate), but the meaning. I know of my fellow only what I conceive of him. Yet I postulate that my conception of him is like him, whereas I do not postulate that my conception of a dragon is like any real animal. Just so I postulate that my conception of the "possible experience" called an atom or the North Pole, is valid beyond my experience, and beyond the actual experience of any known animal. But I do not postulate that my conception of the possibility that future men might have wings and tails is like any future reality whatever, or in any way valid beyond my conception.

Here then is our dilemma. Matter as a mere possibility of experience is more than any animal's known actual experience. And yet this matter is to be real for consciousness. Nor is it to be real for consciousness simply in so far as the possible experience is represented or conceived. The reality consists not merely in the representation in present consciousness of a possible experience, but in the added postulate that this conception is valid beyond the present consciousness. How is this postulate to be satisfied?

Let us sum up the conditions to which our notion of external reality is subject. External reality is something postulated, not given; it is for us because we will it to be. To a portion of our conscious states we ascribe a validity beyond the present. This ascription of validity is the source of our whole knowledge of the external world: *e.g.* of our belief in our own past and future states, in our neighbour's existence, and in the existence of space, of matter, and of motion. The external reality is always conceived as more or less completely the counterpart of our idea of

it and, hence, as in nature like the facts of our consciousness. The idea that we at any moment form of the reality beyond ourselves is the expression of the effort to reduce to unity the present sense-data and the present conception of our own past experience. This reduction to unity takes place in certain forms. Thus we conceive the external reality as in space and in time, and, in the second place, as in causal relation to ourselves. The conception of causal relations thus projected into the external reality becomes, when completed, the conception of a completely united and uniform whole of facts. We conceive the external reality as subject to fixed laws of sequence, certainly existent, even though, in our limited experience, they be undiscoverable. As subject to such laws the external reality is a whole, possessing organic unity. But the external reality is also conceived as being real for consciousness and real only for consciousness. The external reality, being an organic whole, must therefore be conceived as the object of an absolute experience, to which all facts are known, and for which all facts are subject to universal law. But there thus arises an obscurity in our theory of reality. The real is to be only for consciousness. Consciousness is, however, postulated only as existent in our fellow-beings. And yet the postulated reality is to be an organic whole, containing series of facts that to these beings are known only as possible, not as actual experiences.

We are then in this position. To complete our theory, we "want a hero". Not, to be sure, a Don Juan, but an hypothetical subject of the "possible experiences". This hypothetical subject we shall postulate only as an hypothesis. That is, its existence is not a necessary result of the postulate that there is an external reality. One can form other hypotheses. But this hypothesis has the advantage of being simple and adequate. Moreover, to assume a consciousness for which the "possible experiences" are present facts, is to do no more than our theory seems to need; whereas any other hypothesis (Berkeley's theological hypothesis, for example, in its original form) seems to assume more than is demanded by our purely theoretical conception of reality. For the sake then of expressing one aspect of our fundamental postulate, we shall suggest what of course never can be proven, that all the conceived "possible experiences" are actual in a Consciousness of which we suppose nothing but that it knows these experiences, or knows facts corresponding in number and in other relations to these experiences. This Consciousness is the Universal Consciousness of the first part of our paper.

The cold and deadness of this universal Knowing One is thus explained. We do not endow it with life and with will; and

that because for our present purpose to endow it with knowledge is enough. We do not give it physical power over its own phenomena, or over the lives of individual beings; because we now need it only to complete our conception of an absolute experience. The conception of causality is, as we have seen, subordinate to the conception of reality. Causal sequences, seen in the absolute experience, will appear only as ultimate facts of sequence, uniformities that have not been formed, laws without any law-giving force above them, truths and not deeds. For our present purpose, that is enough. But our hypothesis is plastic. An ethical theory of reality, if such can be established, has but to speak the word, and our Universal Consciousness will be transformed into what he now is not, an active Spirit. To his infinite intuition he will join infinite power, and will not only see but make his own states. For the present nothing of this appears. No heart beats in the world; but that is only because no heart beats in any theory as such. If for another philosophy this Universal Consciousness becomes creative, his action will not interfere with his knowledge. It is with his knowledge alone that we are now concerned.

And thus we come to see the meaning of our hypothesis. It is not an attempt to give a psychological explanation of our consciousness, but to express in a simple form, though not in the only form, our natural postulates about external reality. Its value lies not in itself, but in the convenient expression that it gives of the purposes of human thought. It is not a demonstrable truth, but, as the writer holds, a convenient expression of one side, the theoretical, of our postulates about reality. In such a sense our hypothesis may serve, if it has the good fortune, to express some of those motives in the formation of our ideas of reality that were so well stated in Prof. James's article on "The Sentiment of Rationality," in *MIND* XV.

At all events it seems well to show that an idealistic theory of reality is possible that, on the one hand, adequately expresses the postulates of natural science and, on the other hand, avoids any tendency to mingle unduly the ethical with the theoretical, the teleological with the physical. Be it understood then that the writer is fully conscious of the indemonstrable nature of the hypothesis advanced, in so far as it is an hypothesis, and that he admits, in fact insists, that the value of such hypotheses lies not at all in themselves as ontological speculations about an Absolute, but in their success as expressions of the fundamental postulates and purposes of that source of all truth, Conscious Thought.

JOSIAH ROYCE.

III.—THE LOCALISATION OF FALLACY.

As a baby feels pain but cannot localise it, so common sense is often aware of the presence of Fallacy, but fails to see exactly what is wrong. Unskilled controversy is full of expressions pointing to this fact, as when the instinctively fair reasoner, puzzled by an argument which he feels to be illegitimate, but which he knows not how to refute, falls back on the epithet "specious" or "plausible," or boldly declares in some shape or other that an ounce of mother-wit is worth a ton of logic.

Of course, this has its other side. The unfair reasoner, whether instinctively so or purposely, when worsted in argument, often makes the same complaint. He too, not unfrequently, appeals to a "feeling" that his opponent is wrong, and when pressed to say exactly where the fallacy lies, he, too, can only vaguely re-assert that there is error *somewhere*, hint perhaps that some word-jugglery has been employed against him, or at least that his apparent discomfiture is due to his own want of technical skill.

In proportion to our power of localising fallacy would be the strength of our armour against plausible arguments on the one hand and against this plausible excuse on the other: for if there were simple methods of detecting error, he who refused to employ them would thereby half confess the weakness of his cause. If those who profess a thirst for truth fail to show any actual eagerness for it when the means of securing it (at any rate the preliminary means) are ready to hand, we should have a fair presumption that their thirst is not excessive.

Unfortunately the means of localising fallacy are very far from being even practically perfect. The logician has, indeed, his appropriate names for various fallacies, after they have been discovered, but he has almost no rules to help him in discovering them; and such rules as he has demand for the most part as a prior condition of their use that the argument in question shall be translated out of its everyday language into forms that are apt to rouse scorn and impatience in the modern world rather than respect or terror. There is a widespread opinion that life is too short to waste either in arranging our arguments in strict syllogistic form, or in analysing them into what Dr. Whewell called their "A,B,C, and *a,b,c*, elements," and besides, the process of arrangement and translation has so many pitfalls of its own that the popular distrust of Logic can without much difficulty make out a fair case for itself. Practically the commonest resource against fallacy is caricature, or the plan of pushing an argument to its extreme. More strictly perhaps this should be

described as the method of bringing a parallel case in which the fallacy stands naked and ashamed, as where Bentham says of a certain political argument—"It enjoins us to build no parapets to a bridge till the number of accidents has raised a universal clamour," or of another, "If a man's tenants were to come with a general encomium on the prosperity of the country, instead of a specified sum, would it be accepted?" And all controversial writing and speaking is full of examples of this device. Just as, in old times, parables and fables were widely recognised as a forcible means of conveying truth and exposing error, so now essentially the same plan is adopted, though for the most part in a shorter form. Whately's *Logic* and *Rhetoric* may be mentioned as a mine of instances, bad and good, if any illustration is needed of so common a practice, and perhaps no other method will approach this in rhetorical weight. But obviously not everyone can acquire the happy knack of hitting upon apt similes at the right moment; and besides, the line between fair and unfair caricature is always difficult to preserve. This method can hardly be considered a trusty weapon except in the hands of a few privileged persons possessing a more than common share of native acuteness. What is wanted is a means, more easily employed by all, of clearly distinguishing, in practice, any piece of faulty reasoning that occurs. When reasons are produced for a belief held, how are we to judge whether those reasons amount to valid proof, or whether and where the proof breaks down?

By inquiring, in the first place, how far the best existing classifications may be said to supply a means of answering this question we shall most easily keep in view the direction in which to look for a scheme suited to the purpose. Whately's arrangement, based chiefly upon that of Aristotle, and Mill's, following a plan of his own, may I think be taken as fairly representing the classifications that aim at being exhaustive and also at serving the purposes of *Logic* directly. We clearly need not here examine those which like Bacon's *Idola*, or Prof. Bain's "Fallacious Tendencies of the mind," are only intended to be indirectly of logical interest, being mainly psychological; nor need we be deterred by writers who, like De Morgan and Ueberweg, declare that, the forms of fallacy being infinite, any orderly arrangement becomes impossible. From our point of view, as will become sufficiently apparent, this possible infinitude of fallacies affects the methods of guarding and detection really no more than the infinite divisibility of a policeman's beat prevents his keeping a watch over it.

First, we must notice that both Whately and Mill, chosen as being prominent in this field, themselves admit a weak point in

their results. "It must often," says Whately, "be a matter of doubt, or rather of arbitrary choice, not only to which genus each kind of fallacy should be referred, but even to which kind to refer any one individual fallacy." And he further speaks of the utter impossibility of framing any classification which shall be completely secure from this objection. Mill's verdict runs—"We must not, however, expect to find that men's actual errors always, or even commonly, fall so unmistakably under some one of these classes as to be incapable of being referred to any other"; and further—"Almost all fallacies might in strictness be brought under our fifth class, Fallacies of Confusion. A fallacy can seldom be absolutely referred to any of the other classes."

This is obviously disappointing. If the individual fallacy cannot with any certainty be referred to its place in the system, one must confess that either the particular system is at fault, or any attempt at systematic arrangement is hopeless. Of course, it is a useful thing to possess concise and descriptive names for as many as possible of the most frequently recurring forms of error; and if by means of them economy of time and trouble may be effected in comparing a case of fallacy that occurs with others like it, so much is pure gain; but when those names stand confessed of being "not always, or even commonly" applicable with accuracy in the given cases that arise, one can hardly help wishing to seek for other names which might fulfil this purpose properly. And before declaring that the attempt is hopeless, we are bound to search for remediable defects in the existing systems.

Accordingly we find Mill confessing that his classification is founded "jointly" on two principles of division,—a plan which every logician knows must let the classes overlap. Partly, no doubt, owing to the subordinate place which the subject of Fallacies is commonly made to take in the exposition of Logic, care in following the strict rules of division seems to have been considered superfluous. The subject of Fallacies was, in Mill's view, an extra gift, to be thrown in by way of rounding off the system; and was meant, no doubt, to be treated in a spirit of gratitude rather than of criticism. Again, every writer on Fallacy seems to have felt an obligation to find a place somewhere for as many as possible of the names already in use for different kinds of errors, besides occasionally increasing the list himself. Hence there has grown up a tangle of names, overlapping and crossing each other in all directions, given at different times, for different purposes, by different people.

But the greatest difficulty is of another kind. It flows from that main source of trouble—the need for saving time. It con-

sists in the tendency of these classifications to keep alive the practice of *guessing* at the cause of the fallacy, instead of gradually eliminating possibilities of error in the successive stages of a process.¹ Instead of acknowledging that the exact seat of any given case of faulty reasoning is, in most cases, a matter for patient investigation, there has been too much yielding to the popular demand that Logic shall at once and offhand point out any fallacy that occurs. The technical names of fallacies mostly profess a complete knowledge of the *cause* of the given mistake, and though this knowledge may, of course, in some cases be attained, yet a system based upon guess-work (for this is nothing else) must lose in certainty what it gains in pace. So far as Logic has ever claimed to possess, or dreamed of possessing, such infallible insight, it deserves, no doubt, the ridicule it often gets. And in a rhetorical or controversial point of view, there is a further objection. Even where our guess is correct, the life of a fallacy by no means necessarily becomes extinct. The nature of fallacies is to be shadowy and indefinite, soft and flexible: if we attempt to seize them directly, they will often only slip away and appear again in another shape or place. Very few will die through being dragged at once into daylight: the fallacious reasoner as a rule refuses to recognise his own arguments when stripped of their disguises, and if we guess the actual fault correctly, he can often rectify this with the utmost innocence, declare it never needed rectification, and by changing the fallacy still keep his erroneous conclusion. Hence, without *applying some preliminary tests*, it must often remain impossible even for the most skilled practitioner to be certain of the actual cause of a given error: and in the cases where this may be accomplished, it is by no means always possible to produce conviction of the fault. The proper answer, in most cases, to the question—"What fallacy am I committing?" must be, that it is quite impossible to tell without cross-examination; and to supply a framework for such cross-examination should be the main business of a classification aiming at practical use. As a rule, vagueness and error is not, even in the first instance, confined to one part of the process either of reasoning or of reflection on our reasonings, but rather pervades and leavens the whole. Still less tangible does it often become when we disturb it by snatching hastily: driven from one corner it takes refuge

¹ If it should be held that Mill's division (of cases where the evidence is distinctly conceived) into Inductive and Deductive Fallacies really implies the conception of successive stages of a process, there can at least be no doubt that throughout Mill's own account of the classification there is no reference to the fact, and also (what is more important) no hint given as to its capability of being employed in this manner for practical purposes.

in another, and a different part of the process is left vague on different occasions. Besides, so large a portion of all arguments met with in practice must always, through the need for saving time, be left unexpressed or at most dimly indicated, that without applying tests we have only the rudest guess-work to guide us in the search.

Of course, to find the real cause of the error is extremely important. Just as in curing a disease, so in solving a fallacy, it may often be of the highest service to know how the mischief really arose. But a surer method than guessing consists in patiently closing up, one by one, all avenues of escape for the fallacious reasoner,—in drawing a cordon round the fallacy, and so running it to earth. The whole process of reflection on a given case of reasoning may be viewed as a series of distinct steps, the correct performance of every one of which is essential. And in order to localise fallacy with any certainty, there is no resource but to take these steps in regular order and, by means of careful examination, bar out all discoverable error from each in turn.

Fallacies, it will be seen, are thus viewed as a series of possible dangers to, or attacks upon, any case of attempted proof. But this is rather the most definite type of fallacy, and we must attempt to include something more. The distinction between Fallacy and Illusion,¹ as also that between Fallacy and Sophism, should not be considered as real barriers limiting our range. A classification to be of practical value should certainly include even the most indefinite beliefs, for these are perhaps the commonest of all sources of definite error. Not only false conclusions are fallacies in this sense, but also assertions 'without foundation'—if the assertor supposes them to be secure: not only false assertions, but unmeaning ones, if they be taken for anything other than unmeaning; and not only unmeaning assertions, but indefinite ones also, so far as their indefiniteness is unsuspected by their promoter. And as for Sophism, since that only differs from Fallacy in the fact of the sophist recognising, while the fallacious reasoner does not recognise, the illegitimacy of his own reasoning, the distinction is accidental to the mode of error, and therefore need not be here dwelt upon. As regards practice, indeed, Sophism is less formidable than Fallacy proper since clever dishonesty is always a more substantial target than mere limpness of reason or mental incoherence. So far as we can succeed in guarding against fallacy, we may consider ourselves still safer against conscious trickery. And further, the classification should be valid indifferently for

¹ For which see Mr. Sully's recent work on *Illusions*, pp. 6 and 335.

purposes of Logic and of Rhetoric,—for guarding against error or for exposing it. Fallacy is thus understood as including the widest sense that can be given to the term, though we take falsely reasoned belief, or frustrated proof, as typical. In order to treat of fallacy, it is convenient to take the more definite end of the scale. Nor is there, I believe, anything in this view that can be considered contrary to custom.

Since what is wanted for correct reasoning (or valid proof) is a belief, depending on evidence, which evidence is sufficient, the process in question—the process, not of reasoning, in the sense of arriving at our beliefs, but of reflecting on our conclusions already reached—might most naturally be viewed as consisting of three stages:—the inquiries (1) Is the thesis understood? (2) Is the reason understood? (3) Is the reason sufficient? But the (complete) sufficiency of the reason to prove the thesis guarantees in itself the absence of all fallacy; and since one of the main elements of sufficiency, namely, relevancy or, more strictly speaking, *adequacy* (the other main element being, of course, material truth), demands a clear recognition of the meaning of both thesis and reason, it seems, on the whole, a better division to distinguish, in the first place, the two main needs—adequacy and material truth—of the reason given, to subdivide the shortcomings in attaining the former of these into (1) confusion, (α) in the thesis, (β) in the reason given; (2) errors in completing proof (or supplying missing premisses), and these into (α) formal, and (β) material. If the reason given is both adequate and true, the assertion in question is proved: if either of these desiderata fails, the proof breaks down. In order to the recognition of a well-founded belief, it is necessary (1) that there should be a real belief, clearly conceived and steadily held; (2) that, granting this, its grounds should also be clearly and steadily recognised as such, and (5) be true in fact; and that, granting this clear recognition, whatever further assertion may be strictly implied in giving these grounds as guarantee for the belief, should be (3) clearly recognised as necessary, and (4) materially true. Corresponding to these five needs, we get five opportunities of error, five great classes of fallacy.

A table will show more clearly their interdependence:—

$\left\{ \begin{array}{l} \text{Inquiry into } \textit{adequacy} \\ \text{of reason given for} \\ \text{believing.} \end{array} \right\}$	Fallacy.	(Non- sequitur)	$\left\{ \begin{array}{l} \text{Confusion} \\ \text{Failure to com-} \\ \text{plete the proof} \end{array} \right\}$	$\left\{ \begin{array}{l} (1) \text{ In thesis :} \\ (2) \text{ In reason given.} \\ (3) \text{ Formal :} \\ (4) \text{ Material.} \\ (5) \text{ Truth of reason} \\ \text{unduly assumed.} \end{array} \right.$
$\left\{ \begin{array}{l} \text{Inquiry into } \textit{truth} \text{ of} \\ \text{ditto.} \end{array} \right\}$				

The classes are arranged as far as possible in the order of prior

importance : misinterpretation (or confusion) is the most radical error of all, formal fallacies are more elementary than material ones, inadequacy than untruth. We must first see whether there exists a real and steady belief, before we can see whether it is even supposed to be securely founded : and we must see whether it is supposed to have a firm foundation before we need inquire whether it really has one. The belief may, indeed, exist without our being clearly conscious of its existence, and it may even be true. Unconsciousness of the rules of evidence, though a hindrance to the acquirement of truth, does not absolutely prevent it. But one thing is entirely prevented by failure in any one of these five points, and that is, the intelligent *recognition* of our belief as having stood all possible tests of truth. There is *room for error* so long as our belief or its grounds remain unexamined. The above five inquiries, therefore, may be viewed as representing five stages in our progress towards recognising the soundness of any belief set up for trial, five successive opportunities for separate dangers to beset us in the attempt at proof. All five steps must be safely passed through before we can know that any given belief is safe from all discoverable error. Whatever error occurs must occur at one or other of these stages, and each may be tested separately from all the others. It is, of course, not unusual that more than one step is faulty in the same piece of attempted proof, but this does not interfere with our power of naming the fallacy that first appears, or with our right of ceasing to inquire further. We are not concerned with other fallacies until the step found actually faulty be corrected.

In this slight sketch it is not possible to go minutely into details. And, in fact, the first, second, and fifth classes will sufficiently explain themselves. A few remarks, however, on the third and fourth classes seem needed.

The names "formal" and "material" require some apology, but I have been unable to find any other names better suited to the purpose in hand. The distinction here intended has nothing to do with that between deductive and inductive proof : what are here called "formal" fallacies may occur in the latter kind of proof as well as in the former, and our "material" fallacies may occur in any attempt at syllogistic demonstration. The two distinct kinds of proof,—the only two kinds fundamentally distinct,—derivative (or deductive) proof, and empirical (or inductive)—have each their formal and their material sides, in the sense here intended : and it is, properly speaking, only on their formal side that the methods of Logic can give security from error. For when we have guarded against the fallacies here called formal, nothing remains but to inquire whether

our premisses (the general uniformities and individual facts, implied and asserted) are materially true; and this demands an examination of the reasons for believing them, and hence an inquiry into the adequacy and the material truth of those reasons, and so again of the reasons for these reasons, *ad infinitum*. Theoretically, of course, material truth may always be called in question, and practical utility is the umpire that decides where scepticism shall cease. But all that we are here concerned to notice is that the inquiry into the material truth either of the reason originally given for the thesis in dispute or of the further assertion implied in giving it as a reason, shifts the question at issue, and, therefore, properly brings to an end the judicial function of Logic upon that question. The analogy of a judge and a jury might almost be applied,—if care be taken not to stretch the metaphor too far; especially since, for practical purposes, we must always rely to a great extent on common sense as to matters of fact. If Logic, for instance, points out that certain evidence is adequate in support of an assertion, subject to the condition of some widely-accepted uniformity in Nature being true, it would, in many cases, be a purely mischievous waste of time to delay assurance until the grounds of this further assertion had been carefully re-examined. But, however this may be,—and it is, of course, ultimately a question of practical convenience, or rather of the never-ending struggle between the needs of faith and watchfulness,—the point important to us here is that the inquiry into material truth leads to a mere repetition of the logical methods, with always the same remainder over: and that, therefore, in discussing those methods, it is sufficient to carry them up to the point where *adequacy* of the reason given is secured.

Each of the two kinds of proof has its own formal dangers. The formal errors in derivative proof correspond most nearly to the old syllogistic fallacies (including, of course, the conjunctive and disjunctive forms) with one important difference:—since proof, and not inference, is the purpose in view, the fallacies here treated do not consist in drawing a wrong conclusion from given premisses, but in accepting insufficient premisses as guarantee for a given conclusion. Usually a conclusion (thesis) and one premiss (the reason in support of it) are given, and the fallacy lies in resting content with the simple converse, or the unlimited reciprocal, of the required further premiss; but also, sometimes, in accepting a particular proposition in place of a universal, or an incomplete instead of a complete identification.

Under formal errors in empirical proof are included all cases of overlooking the *a priori* possibilities of failure in induction,—the various ways in which the inductive methods are liable to frus-

tration. The inductive methods, of Herschel and Mill, so far as methods of proof, and not merely of discovery, may be viewed as a list (whether perfectly satisfactory or not does not concern us here) of the elementary modes in which we *do* reason from particular facts; each method having its own special dangers, or rather its special forms of the same danger, namely, that of proceeding upon insufficient analysis of the complex cases presented in experience. The "possibility of unknown antecedents" is, in fact, the one enemy to be jealously excluded, whose presence is able to vitiate all our best endeavours. In other words, the formal errors in empirical proof consist in overlooking the need for excluding alternative theories. The burden of proof cannot, in fact, be shaken off by merely claiming that some one (or all) of the five methods has been employed. It cannot be shaken off until the assertor has shown further with what precautions his experiments or observations have been made. If, for instance, the theory of spontaneous generation be supported by an experiment according to the direct method of difference, before accepting the theory as proved, we require to know what has been done to exclude 'unknown antecedents,' and if a loophole has been left open, we have reason to withhold our faith. This is, perhaps, rather an extreme case: commoner instances may be found in such matters as ascribing a headache to the lobster-salad, or, more generally, in tracing an effect to an admitted antecedent without due inquiries and precautions as to the exclusion of all others.

Leaving the mere arrangement of the matter, and glancing at the question of its practical application, it is obvious that this plan of searching (if need be) through the entire process is far longer in practice than the plan of making a happy guess. And since Fallacies have a tendency to run in well-beaten grooves, guesswork must not be entirely condemned. More than this, it may even be said that the chief use of the longer scheme is not necessarily for application in all cases that occur in the hurry and press of daily life, but rather as an ideal scheme, to be employed (as far as possible) in cases important enough to deserve the time and trouble; and for the rest, useful mainly as a discipline, as an indirect means of rendering our guesses less erratic, and above all, as supplying us with a framework on which to piece together in a connected system all the isolated logical doctrines. It is, perhaps, hardly necessary to remark that, in calling this an "ideal scheme," there is no attempt whatever at setting up a complete and infallible organon of truth. The chief point in which this scheme claims an advantage is (as already suggested) in its greater readiness to confess the difficulty which must always exist in diagnosis. The day

of quack medicines in Philosophy may fairly be considered past ; everyone now recognises, consistently enough, our limitations in rendering belief secure. The most that Logic can hope to do is to bring prominently into notice the points at which there is known to be room for error, and to insist on the need for guarding these points to the best of our power. In calling this an ideal, no more is meant than that even this security is, from various causes, not always realisable in practice. It would be a waste of our opportunities of saving time, if we determined never to risk a guess. There are prevailing fashions, and individual tendencies, in fallacy as in other things. If, for instance, we know that the present fashion of some party in English politics is to rely too much on unsifted experience, or to dread the thin end of every possible wedge, or to confuse concrete and abstract questions, such knowledge may sometimes suffice to point out with very high probability the seat of some particular error. So, too, we and our friends have each our own peculiar weakness in reasoning, which may be remembered with advantage ; one being over-sanguine or credulous, another over-cautious or sceptical, a third habitually neglectful of the burden of proof, a fourth almost colour-blind (so to speak) to the medium shades between pairs of opposites, and so on. When we possess a store of trustworthy observations of this kind, it would, of course, be a pity to make no use of them. The important thing is, in such cases, to remember that after all we are merely guessing, and that there is always the longer process to fall back upon if the matter in question is worth the pains. The application of Logic needs a certain amount of judicious compromise, but in all such compromise it is well to keep clearly in view the concessions made, and to regard them not as absolutely inevitable, but as a price willingly paid in certain cases (chiefly where time is an object), and prudently to be withheld in others.

ALFRED SIDGWICK.

IV.—THE RELATION OF GREEK PHILOSOPHY TO MODERN THOUGHT.

I.

ADEQUATELY to exhibit the relation of Greek philosophy to modern thought would require a volume. The object of the present discussion is merely to show in what ways that relation has been most clearly manifested, and what assistance it may afford us in solving some important problems connected with the development of metaphysical and moral speculation.

Historians often speak as if philosophy took an entirely fresh start at different epochs of its existence. One such break is variously associated with Descartes, or Bacon, or some one of their Italian predecessors. In like manner, the introduction of Christianity, coupled with the closing of the Athenian schools by Justinian, is considered, as once was the suppression of the West-Roman Cæsarate by Odoacer, to mark the beginning of a new *régime*. But there can be no more a real break in the continuity of intellectual than in the continuity of political history, beyond what sleep or inactivity may simulate in the life of the organic aggregate no less than in the life of the organic individual. In each instance the thread is taken up where it was dropped. If the rest of the world has been advancing meanwhile, new tendencies will come into play, but only by first attaching themselves to older lines of movement. Sometimes, again, what seems to be a revolution is, in truth, the revival or liberation of an earlier movement through the decay or destruction of beliefs which have hitherto checked its growth. Thus the systems of Plato and Aristotle, after carrying all before them for a brief period, were found unsuitable, from their vast comprehension and high spirituality, to the undeveloped consciousness of their age, and were replaced by popularised versions of the sceptical or naturalistic philosophies which they had endeavoured to suppress. And when these were at length left behind by the forward movement of the human mind, speculative reformers spontaneously reverted to the two great Socratic thinkers for a better solution of the problems in debate. After many abortive efforts, a teacher appeared possessing sufficient genius to fuse their principles into a seemingly coherent and comprehensive whole. By combining the Platonic and Aristotelian spiritualism with some mystical elements borrowed from Stoicism, Plotinus did for an age of intellectual decadence what his models had done in vain for an

age of intellectual growth. The relation in which he stands to Stoicism and Epicureanism reproduces the relation in which they stood to the various physical and sophistic schools of their time; but the silent experience of six centuries won for him a much more enduring success.

Neo-Platonism was the form under which Greek philosophy passed into Christian teaching; and the transition was effected with less difficulty because Christianity had already absorbed some of its most essential elements from the original system of Plato himself. Meanwhile the revival of spiritualism had given an immense impulse to the study of the classic writings whence it was drawn; and the more they were studied the more prominently did their antagonism on certain important questions come into view. Hence no sooner did the two systems between which Plotinus had established a provisional compromise come out victorious from their struggle with materialism, than they began to separate and draw off into opposing camps. The principal subject of dispute was the form under which ideas exist. The conflicting theories of Realism and Nominalism are already set forth with perfect clearness by Porphyry in his introduction to the *Organon*; and his statement of the case, as Victor Cousin has pointed out, gave the signal for a controversy forming the central interest of Scholasticism during the entire period of its duration. Now, it is a remarkable fact, and one as yet not sufficiently attended to, that a metaphysical issue first raised between the Platonists and Aristotle, and regarded, at least by the latter, as of supreme importance for philosophy, should have been totally neglected at a time when abundant documents on both sides were open to consultation, and taken up with passionate eagerness at a time when not more than one or two dialogues of Plato and two or three tracts of Aristotle continued to be read in the western world. Various explanations of this singular anomaly may be offered. It may be said, for instance, that after every moral and religious question on which the schools of Athens were divided had been closed by the authoritative ruling of Catholicism, nothing remained to quarrel over but points too remote or too obscure for the Church to interfere in their decision; and that these were accordingly seized upon as the only field where human intelligence could exercise itself with any approach to freedom. The truth, however, seems to be that to take any interest in the controversy between Realism and Nominalism, it was first necessary that European thought as a whole should rise to a level with the common standpoint of their first supporters. This revolution was effected by the general adoption of a monotheistic faith. Moreover, the Platonic ideas were something more than figments

of an imaginative dialectic. They were now beginning to appear in their true light, and as what Plato had always understood them to be—no mere abstractions from experience, but spiritual forces by which sensuous reality was to be reconstituted and reformed. The Church herself seemed something more than a collection of individuals holding common convictions and obeying a common discipline; she was, like Plato's own Republic, the visible embodiment of an archetype laid up in Heaven. And the Church's teaching seemed also to assume the independent reality of abstract ideas. Does not the Trinity involve belief in a God distinct from any of the Divine Persons taken alone? Do not the Fall, the Incarnation, and the Atonement become more intelligible if we imagine an ideal humanity sinning with the first Adam and purified by becoming united with the second Adam? Such, at least, seems to have been the dimly conceived metaphysics of St. Paul, whatever may now be the official doctrine of Rome. It was therefore in order that, during the first half of the Middle Ages, from Charlemagne to the Crusades, Realism should have been the prevailing doctrine; the more so because Plato's *Timæus*, which was studied in the schools through that entire period, furnishes its readers with a complete theory of the universe; while only the formal side of Aristotle's philosophy is represented by such of his logical treatises as were then known to Western Christendom.

Yet Realism concealed a danger to orthodoxy which was not long in making itself felt. Just as the substantiality of individuals disappeared in that of their containing species, so also did every subordinate species tend to vanish in the *summum genus* of absolute Being. Now such a conclusion was nothing less than full-blown Pantheism; and Pantheism was, in fact, the system of the first great Schoolman, John Scotus Erigena; while other Realists were only prevented from reaching the same goal by the restraint either of Christian faith or of ecclesiastical authority. But if they failed to draw the logical consequences of their premisses, it was drawn for them by others; and Abélard did not fail to twit his opponents with the formidable heresy implied in their realistic principles.¹ As yet, however, the weight of authority inclined towards Plato's side; and the persecution suffered by Abélard himself, as compared with the very mild treatment accorded to his contemporary, Gilbert de la Porrée, when each was arraigned on a charge of heresy, shows that while the Nominalism of the one was an aggravation, the Realism of the other was an extenuation, of his offence.²

¹ Hauréau, *Histoire de la Philosophie Scolastique*, I. 372.

² For Gilbert de la Porrée see Hauréau, I., chap. xviii.

So matters stood when the introduction of Aristotle's entire system into Western Europe brought about a revolution comparable to that effected two centuries later by the complete recovery of ancient literature. It was through Latin translations from the Arabic, accompanied by Arabic commentaries, that the Peripatetic philosophy was first revealed in its entirety; and even Albertus Magnus, living in the thirteenth century, seems to have derived his knowledge of the subject from these exclusively. But in 1209, a few years after the capture of Constantinople by the Crusaders, the Greek manuscripts of Aristotle were brought to Paris, and towards the middle of the century a new Latin version was made from these under the supervision of St. Thomas Aquinas.¹ The triumph of Aristotle was now, at least for a time, secured. For, while in the first period of the Middle Ages we find only a single great name, that of Abélard, among the Nominalists, against a strong array of Realists, in the second period the proportions are reversed, and Realism has only a single worthy champion, Duns Scotus, to pit against Albertus, Aquinas, and William of Ockham, each of them representing one of the principal European nations. The human intellect, hitherto confined within the narrow bounds of logic, now ranged over physics, metaphysics, psychology, and ethics; and although all these subjects were studied only at second-hand and with very limited opportunities for criticism, still the benefit received must have been immense. The priceless service of the later Schoolmen is to have appropriated and successfully upheld, against Platonism on the one hand and theological mysticism on the other, a philosophy which, however superficial, took in the whole range of natural phenomena, derived all knowledge from external observation, and set an example of admirable precision in the systematic exposition of its results. If no positive addition was made to that vast storehouse of facts and ideas, the blame does not lie with Aristotle's method, but with the forcible suppression of free mental activity by the Church, or its diversion to more profitable fields by the study of Roman jurisprudence. Even as it was, Aristotle contributed largely to the downfall of ecclesiastical authority in two ways; directly by accustoming men to use their reason, and indirectly by throwing back mysticism on its proper office—the restoration of a purely personal religion.

But before the dissolving action of Nominalism had become fully manifest, its ascendancy was once more challenged; and this time, also, the philosophical impulse came from Constantinople. Greek scholars, seeking help in the West, brought with

¹ Jourdain, *Recherches critiques sur les Traductions latines d'Aristote.*

them to Florence the complete works of Plato, and these were shortly made accessible to a wider public through the Latin translation of Ficino. Their influence seems at first to have told in favour of mysticism, for this was the contemporary tendency to which they could be most readily affiliated; and, besides, in swinging back from Aristotle's philosophy to the rival form of spiritualism, men's minds naturally reverted in the first instance to what had once linked them together—the system of Plotinus. Thus Platonism was studied through an Alexandrian medium and as the Alexandrians had looked at it, that is to say, chiefly under its theological and metaphysical aspects. As such it became the accepted philosophy of the Renaissance, and much of what we most admire in the literature—at least the English literature—of that period, is directly traceable to Platonic influence. That the *Utopia* of Sir Thomas More was inspired by the *Republic* and the *Critias* is, of course, obvious; and the great part played by the ideal theory in Spenser's *Faery Queen*, though less evident, is still sufficiently clear. As Mr. Green observes in his *History of the English People* (II. 413), "Spenser borrows, in fact, the delicate and refined forms of the Platonic philosophy to express his own moral enthusiasm. . . . Justice, Temperance, Truth are no mere names to him, but real existences to which his whole nature clings with a rapturous affection." Now it deserves observation, as illustrating a great revolution in European thought, that the relation of Plato to the epic of the English Renaissance is precisely paralleled by the relation of Aristotle to the epic of mediæval Italy. Dante borrows more than his cosmography from the Stagirite. The successive circles of Hell, the spirals of Purgatory, and the spheres of Paradise, are a framework in which the characters of the poem are exhibited, not as individual actors whom we trace through a life's history, but as types of a class and representatives of a single mental quality, whether vicious or virtuous. In other words, the historical arrangement of all previous poems is abandoned in favour of a logical arrangement. For the order of contiguity in time is substituted the order of resemblance and difference in idea. How thoroughly Aristotelian, indeed, were the lines within which mediæval imagination moved is proved by the possibility of tracing them in a work utterly different from Dante's—the *Decameron* of Boccaccio. The tales constituting this collection are so arranged that each day illustrates some one special class of adventures; only, to make good Aristotle's principle that earthly affairs are not subject to invariable rules, a single departure from the prescribed subject is allowed in each decade; while during one

entire day the story-tellers are left free to choose a subject at **their own discretion.**

Now what distinguishes Spenser from Dante is that, while he also disposes his inventions according to an extremely artificial and abstract schematism, with him, as with Plato, abstractions acquire a separate individual existence, being, in fact, embodied as so many persons; while Dante, following Aristotle, never separates his from the concrete data of experience. And it may be noted that, in this respect at least, English literature has not deserted the philosophy which presided over its second birth. It has ever since been more prone to realise abstraction than any other literature, whether under the form of allegories, parables, or mere casual illustrations drawn from material objects. Even at this day English writers crowd their pages with dazzling metaphors which to Continental readers must have sometimes a rather barbaric effect.

Another and profounder characteristic of Plato, as distinguished from Aristotle, is his thoroughgoing opposition of reality to appearance; his distrust of sensuous perception, imagination, and opinion; his continual appeal to a hidden world of absolute truth and justice. We find this profounder principle also grasped and applied to poetical purposes in our Elizabethan literature, not only by Spenser, but by a still greater master—Shakespeare. It is by no means unlikely that Shakespeare may have looked into a translation of the *Dialogues*; at any rate, the intellectual atmosphere he breathed was so saturated with their spirit that he could easily absorb enough of it to inspire him with the theory of existence which alone gives consistency to his dramatic work from first to last. For the essence of his comedies is that they represent the ordinary world of sensible experience as a scene of bewilderment and delusion, where there is nothing fixed, nothing satisfying, nothing true; as something which, because of its very unreality, is best represented by the drama, though not without mysterious intimations of a reality behind the veil. In them we have the

"Fallings from us, vanishings,
Blank misgivings of a creature
Moving about in worlds not realised ;"

while in his tragedies we have the realisation of those worlds—the workings of an eternal justice which alone remains faithful to one purpose through the infinite flux of passion and of sense.

Besides the revival of Platonism, three causes had conspired to overthrow the supremacy of Aristotle. The literary Renaissance with its passion for beauty of form was alienated by the barbarous dialect of Scholasticism; the mystical theology of

Luther saw in it an ally both of ecclesiastical authority and of human reason; and the new spirit of passionate revolt against all tradition attacked the accepted philosophy in common with every other branch of the official university curriculum. Before long, however, a reaction set in. The innovators discredited themselves by an extravagance, an ignorance, a credulity, and an intolerance worse than anything in the teaching which they decried. No sooner was the Reformation organised as a positive doctrine than it fell back for support on the only model of systematic thinking at that time to be found. The Humanists were conciliated by having the original text of Aristotle placed before them, and they readily believed, what was not true, that it contained a wisdom which had eluded mediæval research. But the great scientific movement of the sixteenth century contributed, more than any other impulse, to bring about an Aristotelian reaction. After winning immortal triumphs in every branch of art and literature, the Italian intellect threw itself with equal vigour into the investigation of physical phenomena. Here Plato could give little help, whereas Aristotle supplied a methodised description of the whole field to be explored, and contributions of extraordinary value towards the understanding of some at least among its infinite details. And we may measure the renewed popularity of his system not only by the fact that Cesalpinus, the greatest naturalist of the age, professed himself its adherent, but also by the bitterness of the criticisms directed against it, and the involuntary homage offered by rival systems which were little more than meagre excerpts from the Peripatetic ontology and logic.

Of all testimonies to the restored supremacy of Aristotelianism, there is none so remarkable as that afforded by the thinker who, more than any other, has enjoyed the credit of its overthrow. To call Francis Bacon an Aristotelian will seem to most readers a paradox. Such an appellation would, however, be much nearer the truth than were the titles formerly bestowed on the author of the *Novum Organum*. The notion, indeed, that he was in any sense the father of modern science is rapidly disappearing from the creed of educated persons. Its long continuance was due to a coalition of literary men who knew nothing about physics and of physicists who knew nothing about history or philosophy. It is certain that the great discoveries made both before and during Bacon's lifetime were the starting-point of all future progress in the same direction. It is equally certain that Bacon himself had either not heard of those discoveries or that he scornfully rejected them. But it might still be contended that he divined and formulated the only method by which these and all other great additions to human know-

ledge have been made, had not the delusion been dispelled by recent investigations, more especially those of his own editors, Messrs. Ellis and Spedding. Mr. Spedding has shown that Bacon's method never was applied to physical science at all. Mr. Ellis has shown that it was incapable of application, being founded on a complete misconception of the problem to be solved. The facts could, in truth, have hardly been other than what they are. Had Bacon succeeded in laying down the lines of future investigation, it would have been a telling argument against his own implied belief that all knowledge is derived from experience. For, granting the validity of that belief, a true theory of discovery can only be reached by an induction from the observed facts of scientific practice. It would have been still more extraordinary had he furnished a clue to the labyrinth of nature without ever having explored its mazes on his own account. Even as it is, from Bacon's own point of view the contradiction remains. If ever any system was constructed *a priori* the *Instauratio Magna* was. But there is really no such thing as *a priori* speculation. Apart from observation the keenest and boldest intellect can do no more than rearrange the materials supplied by tradition, or give a higher generalisation to the principles of other philosophers. This was precisely what Bacon did. The wealth of aphoristic wisdom and ingenious illustration scattered through his writings belongs entirely to himself; but his dream of using science as an instrument for acquiring unlimited power over nature is inherited from the astrologers, alchemists, and magicians of the Middle Ages; and his philosophical system, with which alone we are here concerned, is partly a modification, partly an extension, of Aristotle's. An examination of its leading features will at once make this clear.

Bacon begins by demanding that throughout the whole range of experience new facts should be collected on the largest scale, in order to supply materials for scientific generalisation. There can be no doubt that he is here guided by the example of Aristotle, and of Aristotle alone. Such a storehouse of materials is still extant in the *History of Animals*, which evidently suggested the use of the word "History" in this sense to Bacon, and which, by the way, is immensely superior to anything that he ever attempted in the same line. The facts on which Aristotle's *Politics* is based were contained in another vast descriptive work of the same kind, now unhappily lost. Even the Stagirite's more systematic treatises comprise a multitude of observations, catalogued according to a certain order, but not reduced to scientific principles. What Bacon did was to carry out, or to bid others carry out, the plan so suggested in every department

of inquiry. But if we ask by what method he was guided in his survey of the whole field to be explored, how he came by a complete enumeration of the sciences arranged according to their logical order, the answer is still that he borrowed it from the Peripatetic encyclopædia.

One need only compare the catalogue of particular histories subjoined to the *Parasceve*,¹ with a table of Aristotle's works, to understand how closely Bacon follows in the footsteps of his predecessor. We do indeed find sundry subjects enumerated on which the older student had not touched, but they are only such as would naturally suggest themselves to a man of comprehensive intelligence, coming nearly two thousand years after his original; while they are mostly of no philosophical value whatever. Bacon's merit was to bring the distinction between the descriptive sciences and the theoretical sciences into clearer consciousness, and to give a view of the former corresponding in completeness to that already obtained of the latter.

The methodical distinction between the materials for generalisation and generalisation itself, is derived from the metaphysical distinction between Matter and Form in nature.² This distinction is the next great feature of Bacon's philosophy, and it is taken, still more obviously than the first, from Aristotle, the most manifest blots of the original being faithfully reproduced in the copy. The Forms of simple substances were, according to the Stagirite, their sensible qualities. The Forms of aggregates were the whole complex of their differential characteristics. And although the formal cause or idea of a thing was carefully discriminated from its efficient and final causes, it was found impossible in practice to keep the three from running into one. Again, the distinction between single concepts and the judgments created by putting two concepts together, although clearly conveyed by the logical distinction between terms and propositions was no sooner perceived than lost sight of, thanks to the unfortunate theory of essential predication. For it was thought that the import of universal propositions consisted either in stating the total concept to which a given mark belonged, or in annexing a new mark to a given concept. Hence in Aristotle's system the study of natural law means nothing but the definition and classification of natural types; and the whole universe is conceived as an arrangement of concentric spheres, each receiving its impulse from that immediately above

¹ *Works* I. 405 in Ellis & Spedding's Ed.

² "Historia naturalis . . . materia prima philosophiæ." *De Aug.* II. iii.

it. Precisely the same confusion of Form, Cause, and Law reigns throughout Bacon's theory of nature. We do, indeed, find mention made of axiomata or general propositions to a greater extent than in the *Organon*, but they are never clearly distinguished from Forms, nor Forms from functions.¹ And although efficient and material causes are assigned to physics, while formal and final causes are reserved for metaphysics—an apparent recognition of the wide difference between the forces which bring a thing into existence and the actual conditions of its stability,—this arrangement is a departure from the letter rather than from the spirit of Aristotle's philosophy. For the efficient causes of the *De Augmentis* answer roughly to the various kinds of motion discussed in the *Physics* and in the treatise *On Generation and Corruption*; while its Forms are, as we have seen, identified with natural causes or laws in the most general sense.

According to Bacon, the object of science is to analyse the complex of Forms making up an individual aggregate into its separate constituents, the object of art to superinduce one or more such Forms on a given material. Hence his manner of regarding them differs in one important respect from Aristotle's. The Greek naturalist was before all things a biologist. His interest lay with the distinguishing characteristics of animal species. These are easily discovered by the unassisted eye; but while they are comparatively superficial, they are also comparatively unalterable. The English experimenter, being primarily concerned with inorganic bodies, whose properties he desired to utilise for industrial purposes, was led to consider the attributes of an object as at once penetrating its inmost texture, and yet capable of being separated from it. But, like every other thinker of the age, if he escapes from the control of Aristotle it is only to fall under the dominion of another Greek master—in this instance Democritus. Bacon had a great admiration for the Atomists, and although his inveterate Peripatetic proclivities prevented him from embracing their theory as a whole, he went along with it so far as to admit the dependence of the secondary on the primary qualities of matter.

The next step was to create a method for determining the particular configuration on which any given property of matter depends. If such a problem could be solved at all, it would be by some new system of practical analysis. Bacon did not see this because he was a Schoolman, emancipated, indeed, from

¹ The "notions and conceptions" of the *Advancement of Learning* (*Works*, III. 356) is rendered by "axiomata" in the *De Augmentis* (I. 567), where in both instances the question is entirely about Forms. Cp. § 8 of Professor Fowler's Introduction to the *Novum Organum*.

ecclesiastical authority but retaining a blind faith in the power of logic. Aristotle's *Organon* had been the great storehouse of aids to verbal disputation; it should now be turned into an instrument for the more successful prosecution of physical researches. What definitions were to the one, that Forms should be to the other; therefore both could be determined by much the same process. Now Aristotle himself had emphatically declared that the concepts out of which propositions are constructed were discoverable by induction and by induction alone. With him, induction meant comparing a number of instances and abstracting the one circumstance, if any, in which they agreed. When the object is to establish a proposition inductively, he has recourse to a method of elimination, and bids us search for instances which, differing in everything else, agree in the association of two particular marks. (*Prior Analyt.* II. xxx.) In the *Topics* he goes still further and supplies us with a variety of tests for ascertaining the relation between a given predicate and a given subject. Among these Mill's Methods of Difference, Residues, and Concomitant Variations are very clearly stated.¹ But he does not call such modes of reasoning Induction. So far as he has any general name for them at all, it is Dialectic, that is Syllogism of which the premisses are not absolutely certain; and as a matter of nomenclature he seems to be right. There is undoubtedly a process by which we arrive at general conclusions from the comparison of particular instances; but this process in its purity is nothing more nor less than induction by simple enumeration. All other reasoning requires the aid of universal propositions, and is therefore, to that extent, deductive. The methods of elimination or, as they are now called, of experiment, involve at every step the assumption of general principles duly specified in that chapter of Mill's *Logic* where they are analysed. And wherever we can rise immediately from a single instance to a general law, it is because the examination of that single instance has been preceded by a chain of deductive reasoning.

The confusion of Induction properly so called and Elimination under a single name is largely due to the bad example set by Bacon. He found it stated in the *Analytics* that all concepts and general propositions are established either by syllogism or by induction; and he found some very useful rules laid down in the *Topics* not answering to what he understood by the

¹ Professor Bain after mentioning that the second book of the *Topics* "sets forth in a crude condition the principal canons of inductive logic," goes on to say that, "these statements cannot be called germs for they never germinated" (Grote's *Minor Works*, p. 14). May they not have germinated in the *Novum Organum*?

former method ; he therefore summarily dubbed them with the name of Induction which they have kept ever since to the incalculable confusion of thought.

In working out his theory of logic, the point on which Bacon lays most stress is the use of negative instances. He seems to think that their application to reasoning is an original discovery of his own. But on examination no more seems to be meant by it than that, before accepting any particular theory, we should consider what other explanations of the same fact might conceivably be offered. In other words, we should follow the example already set by Aristotle and nearly every other Greek philosopher after Socrates. But this is not induction ; it is reasoning down from a disjunctive proposition, generally assumed without any close scrutiny, with the help of sundry conditional propositions, until we reach our conclusion by a sort of exhaustive process. Either this, that, or the other is the explanation of something. But if it were either that or the other, so and so would follow, which is impossible ; therefore it must be this. No other logic is possible in the infancy of inquiry ; but one great advantage of experiment and mathematical analysis is to relieve us from the necessity of employing it.

The value of experimentation as such had, however, scarcely dawned on Bacon. His famous Prerogative Instances are in the main a guide to simple observation, supplemented rather than replaced by direct interference with the phenomena under examination, comparable to that moderate use of the rack which he would have countenanced in criminal procedure. There was perhaps a deeper meaning in Harvey's remark that Bacon wrote about nature like a Lord Chancellor than the great physiologist himself suspected. To Bacon the statesman, science was something to be largely endowed out of the public treasury in the sure hope that it would far more than repay the expenditure incurred by inventions of priceless advantage to human life. To Bacon the lawyer, nature was a person in possession of important secrets to be wrested from her by employing every artifice of the spy, the detective, the cross-examiner, and the inquisitorial judge ; to Bacon the courtier, she was a sovereign whose policy might be discovered, and, if need be, controlled, by paying judicious attention to her humours and caprices. And for this very reason he would feel drawn by a secret affinity to the Aristotelian dialectic, derived as it was through Socrates and Plato from the practice of the Athenian law-courts and the debates of the Athenian assembly. No doubt the *Topics* was intended primarily for a manual of debate rather than of scientific inquiry ; and the English Chancellor showed true philosophic genius in his attempt to utilise it for the latter purpose. Nevertheless the

adaptation proved a mistake. The Socratic dialectic was reserved exclusively by its great founder, and almost exclusively by his successors, for those human interests from the discussion of which it was first derived. And the discoverers, who in Bacon's own lifetime were laying the foundations of physical science, employed a method totally different from his, because they started with a totally different conception of the universe. To them it was not a living whole, a Form of Forms, but a sum of forces to be analysed, isolated and recombined, in fact or in idea, with a sublime disregard for the conditions under which they were presented to ordinary experience. That very extension of human power anticipated by Bacon came in a manner of which he had never dreamed. It was gained by studying, not the Forms to which he attached so much importance, but the modes of motion which he had relegated to a subordinate place in his classification of natural causes.¹

It has been said that, whatever may be the value of his logic,

¹ Descartes showed a much deeper insight into the scientific conditions of industrial progress than Bacon. His words are, "On peut trouver une philosophie pratique par laquelle connoissant la force et les actions du feu, de l'eau, de l'air, des astres, des cieux, et de tous les autres corps qui nous environnent, aussi distinctement que nous connoissons les divers mestiers de nos artisans, nous les pourrions employer en même façon à tous les usages auxquels ils sont propres, et ainsi nous rendre comme maîtres et possesseurs de la Nature." *Discours de la Méthode* Sixième Partie. This passage has been recently quoted by Dr. Bridges ("Comte's Definition of Life," *Fortnightly Review* for June 1881, p. 684) to illustrate what seems a very questionable position. He says that the Copernican astronomy, by revealing the infinitude of the universe, made men despair of comprehending nature in her totality, and thus threw them back on inquiries of more directly human interest and practical applicability; particularly specifying "the lofty utilitarianism of the *Novum Organum* and of the *Discours de la Méthode*," as "one of the first concomitants" "of this intellectual revolution." There seems to be a double misconception here: for, in the first place, Bacon could hardly have been influenced by a theory which he persistently rejected; and in the next place neither Bacon nor Descartes showed a trace of the Positivist tendency to despair of attaining absolute and universal knowledge. Both of them expected to discover the inmost essences of things; and neither of them imagined that a different set of conditions might come into play outside the boundaries of the visible universe. In fact they believed themselves to be enlarging instead of restricting the field of mental vision; and it was from this very enlargement that they anticipated the most momentous practical results. It was with Locke, as we shall see hereafter, that the sceptical or agnostic movement began. In this same article Dr. Bridges repeats, probably on Comte's authority, the incredible statement that "Thales taught the Egyptian priests those two or three elementary truths as to the laws of triangles, which enabled them to tell the height of the pyramid by measuring its shadow." Comte's ignorance or carelessness in relating this story as a well-attested fact was long ago noticed with astonishment by Grote. (*Life of George Grote*, p. 204.)

Bacon recalled men from the construction of baseless theories to the study of facts. But here also he merely echoes Aristotle, who said the same thing long before him, with much greater terseness, and with the superior authority of one who teaches by example as well as by precept; while the merit of reviving Aristotle's advice when it had fallen into oblivion belongs to another Bacon, the author of the *Opus Majus*; the merit of acting on it, to the *savants* of the Renaissance, to such men as Vesalius, Cesalpinus, and Tycho Brahe.

But towards the close of the sixteenth century the time for amassing observations was past, no further progress being possible until the observations already recorded were interpreted aright. The just instinct of science perceived this; and for nearly a century after Cesalpinus no addition of any magnitude was made to what Bacon called "History," while men's conceptions of natural law were undergoing a radical transformation.¹ To choose such a time for developing the Aristotelian philosophy was peculiarly unfortunate; for that philosophy had become, both on its good and on its bad side, an obstacle to progress, by encouraging studies which were not wanted, and by fostering a spirit of opposition to the Copernican astronomy.

The mere fact that Aristotle himself had pronounced in favour of the geocentric system did not count for much. The misfortune was that he had constructed an entire physical philosophy in harmony with it; that he had linked this to his metaphysics; and that the sensible experience on whose authority he laid so much stress, seemed to testify in its favour. The consequence was that those thinkers who, without being professed Aristotelian partisans, still remained profoundly affected by the Peripatetic spirit could not see their way to accepting a theory with which all the hopes of intellectual progress were bound up. These considerations will enable us to understand the attitude of Bacon towards the new astronomy; while, conversely, his position in this respect will serve to confirm the view of his character set forth in the preceding pages. The theory, shared by him with Aristotle, that nature is throughout composed of Form and Matter reached its climax in the supposition that the great elementary bodies are massed together in a series of concentric spheres disposed according to some principle of graduation, symmetry, or contrast; and this seemed incompatible with any but a geocentric arrangement. It is true that Bacon quarrelled with the particular system maintained by Aristotle, and, under

¹ This "Stationary Interval" is noticed by Whewell (*History of the Inductive Sciences*, Bk. XVI., chapter iii., sect. 3), but without determining either its just limits or its real cause.

the guidance of Telesius, fell back on a much cruder form of cosmography; but his mind still remained dominated by the fancied necessity of conceiving the universe under the form of a stratified sphere; and those who persist in looking on him as the apostle of experience will be surprised to find that he treated the subject entirely from an *a priori* point of view. The truth is that Bacon exemplified, in his own intellectual character, every one of the fundamental fallacies which he has so picturesquely described. The unwillingness to analyse sensible appearances into their ideal elements was his Idol of the Tribe; the thirst for material utilities was his Idol of the Cave; the uncritical acceptance of Aristotle's metaphysics, his Idol of the Theatre; and the undefined notions associated with induction, his Idol of the Market.

We may consider it a fortunate circumstance that the philosophy of Form, that is to say, of description, definition, classification, and sensuous perception, as distinguished from mathematical analysis and deductive reasoning, was associated with a demonstrably false cosmology, as it thus became much more thoroughly discredited than would otherwise have been possible. At this juncture the first to perceive and point out how profoundly an acceptance of the Copernican theory must affect men's beliefs about nature and the whole universe, was Giordano Bruno; and this alone would entitle him to a great place in the history of philosophy. The conception of a single finite world surrounded by a series of eternal and unchangeable crystal spheres must, he said, be exchanged for the conception of infinite worlds dispersed through illimitable space. Once grant that the earth has a double movement round its own axis and round the sun, and Aristotle's whole system of finite existence collapses at once, leaving the ground clear for an entirely different order of ideas.¹ But in this respect whatever was established by the new science had already been divined by a still older philosophy than Aristotle's, as Bruno himself gladly acknowledged,² and the immediate effect of his reasoning was to revive the Atomic theory. The assumption of infinite space, formerly considered an insuperable objection to that theory, now became one of its chief recommendations; the arguments of Lucretius regained their full force, while his fallacies were let drop; Atomism seemed not only possible but necessary; and the materialism once associated with it was equally revived. But

¹ *Compreso che sarà il moto di quest' astro mondano in cui siamo . . . s'aprirà la porta de l'intelligenza de li principj veri di cose naturali. De l'Infinito Universo e Mondi*, p. 51, Wagner's Ed.

² "Sono amputate radici che germogliano, son cose antiche che rivegnono." *Ib.*, p. 82.

Aristotelianism, as we have seen, was not alone in the field, and on the first symptoms of a successful revolt its old rival stood in readiness to seize the vacant throne. The question was how far its claim would be supported, and how far disputed by the new invaders. It might be supposed that the older forms of Greek philosophy, thus restored to light after an eclipse of more than a thousand years, would be not less hostile to the poetic Platonism than to the scientific Aristotelianism of the Renaissance. Such, however, was not the case; and we have to show how an alliance was established between these apparently opposite lines of thought, eventually giving birth to the highest speculation of the following century.

Bruno himself acted as a mediator between the two philosophies. His sympathies with Platonism were strongly pronounced, he looked with admiration on its mediæval supporters, especially David of Dinan; and regretted the time when Oxford was a focus of realistic teaching, instead of being what he found her, devoted to the pedantic humanism of the Renaissance.¹ He fully accepted the pantheistic conclusions towards which Platonism always tended; but in proclaiming an absolute principle whence all specific differences are evolved, he is careful to show that, while it is neither Form nor Matter in the ordinary sense, it may be called Matter in the more refined signification attached to that term by Plotinus and indeed by Aristotle himself. There is a common substance underlying all abstract essences, just as there is a common substance left behind when the sensible qualities of different bodies are stripped off; and both are at bottom the same. Thus Monism became the banner round which the older forms of Greek speculation rallied in their assault on Aristotle's philosophy, though what it meant was as yet very imperfectly understood.

Meanwhile a new and powerful agency was about to interpose with decisive effect in the doubtful struggle. This was the study of mathematics. Revived by the Arabians and never wholly neglected during the Middle Ages, it had profited by the general movement of the Renaissance, and was finally applied to the cosmical problem by Galileo. In this connexion two points of profound philosophical interest must be noted. The first is that, even in its fall, the Aristotelian influence survived, to some extent, both for good and for evil. To Aristotle belongs the merit of having been the first to base astronomy on physics. He maintains the earth's immobility on experimental no less than on speculative grounds. A stone thrown straight up in

¹ *Principio Causa et Uno*, p. 225. For David of Dinan, whose opinions are known only through the reports of Albertus and Aquinas, see Hauréau, II., iv.

the air returns to its starting point instead of falling to the west of it; and the absence of stellar parallax seems to show that there is no change in our position relatively to the heavenly bodies. After satisfying himself on empirical considerations that the popular astronomy is true, he proceeds to show that it must be true by considerations on the nature of matter and motion, which, although mistaken, are conceived in a genuinely scientific spirit. Now Galileo saw that, to establish the Copernican system, he must first grapple with the Peripatetic metaphysics, and replace them by a new dynamical theory. This, which he could hardly have effected by the ordinary mathematical methods, he did by borrowing the analytical method of Atomism and applying it to the measurement of motion. The law of falling bodies was ascertained by resolving their descent into a series of moments, and determining its rate of velocity at successive intervals; and curvilinear motions were similarly resolved into the combination of an impulsive with an accelerating force, a method diametrically opposed to that of Bacon who would not even accept the rough analysis of the apparent celestial motions proposed by Greek astronomers.

It seems strange that Galileo, having gone so far, did not go a step further and perceive that the planetary orbits, being curvilinear, must result from the combination of a centripetal with a tangential force. But the truth is that he never seems to have grasped his own law of inertia in its full generality. He understood that the planets could not have been set in motion without a rectilinear impulse; but his idea was that it continued only so long as was necessary, in order to give them their present velocity instead of acting on them for ever as a tangential force. The explanation of this strange inconsequence must be sought in a survival of Aristotelian conceptions, in the persistent belief that rectilinear motion was necessarily limited and temporary, while circular movement was natural, perfect and eternal.¹ Now such conceptions as nature, perfection, and eternity always rebel against an analysis of the phenomena wherein they are supposed to reside. The same prejudice will explain why Galileo should have so persistently ignored Kepler's Laws, for we can hardly imagine that they were not brought under his notice.

The philosophical affinities of the new science were not exhausted by the atomistic analysis of Democritus and the regulative method of Aristotle. Platonism could hardly fail to

¹ Galileo's words are:—"Il moto circolare è naturale del tutto e delle parti mentre sono in ottima disposizione." *Dialoghi sui Massimi Sistemi. Opere*, Vol I. p. 265; see also p. 38.

benefit by the great impulse given to mathematical studies in the latter half of the sixteenth century. The passionate love of its founder for geometry must have recommended him as much to the most advanced minds of the period as his religious mysticism had recommended him to the theologians of the earlier Renaissance. And the increasing ascendancy of the heliocentric astronomy with its splendid defiance of sense and opinion was indirectly a triumph for the philosophy which, more than any other, had asserted the claims of pure reason against both. We see this distinctly in Galileo. In express adhesion to Platonism, he throws his teaching into a conversational form, endeavouring to extract the truth from his opponents rather than convey it into their minds from without; and the theory of reminiscence as the source of demonstrative knowledge seems to meet with his approval.¹ He is always ready with proofs drawn from observation and experiment; but nothing can be more in Plato's spirit, nothing more unlike Aristotle and Bacon, than his encomium on the sublime genius of Aristarchus and Copernicus for having maintained a rational hypothesis against what seemed to be the evidence of their senses.² And he elsewhere observes how much less would have been the glory of Copernicus had he known the experimental verification of his theory.³

The Platonic influence told even more efficaciously on Galileo's still greater contemporary Kepler. With him as with the author of the *Republic*, mysticism took the direction of seeking everywhere for evidence of mathematical proportions. With what brilliant success the search was attended, it is needless to relate. What interests us here is the fact vouched for by Arago, that the German astronomer was guided by an idea of Plato's, that the world must have been created on geometrical principles.⁴ Had Bacon known anything about the work on which his adventurous contemporary was engaged, we may be sure that it would have afforded him another illustration for his *Idôla*, the only difficulty being whether it should be referred to the illusions of the Tribe, the Den, or the Theatre.

Meanwhile Atomism continued to exercise a powerful influ-

¹ *Dialoghi*, p. 211.

² "Non posso trovar termine all' ammirazione mia come abbia possuto in Aristarco e nel Copernico far la ragione tanta violenza al senso che contro a questo ella si sia fatta padrona della loro credulità." *Dialoghi*, p. 358.

³ *Ib.*, p. 370.

⁴ "Kepler était persuadé de l'existence de ces lois en suivant cette pensée de Platon : que Dieu, en créant le monde, avait dû faire de la géométrie." Arago, *Œuvres* III., 212.

ence on the method even more than on the doctrines of science. The analytical mode of treatment, applied by Galileo to dynamics, was applied, with equal success, by other mathematicians, to the study of discrete and continuous quantity. It is to the division of numbers and figures into infinitesimal parts—a direct contravention of Aristotle's teaching,—that we owe logarithms, algebraic geometry, and the differential calculus. Thus was established a connexion between spiritualism and materialism, the philosophy of Plato and the philosophy of Democritus. Out of these elements together with what still survived of Aristotelianism was constructed the system of Descartes.

To understand Descartes aright we must provisionally disregard the account given in his work on *Method* of the process by which he arrived at a new theory of the world; for, in truth, there was nothing new about it except the proportion in which fragments taken from older systems were selected and recombined. As we have already noticed, there is no such thing as spinning philosophies out of one's own head; and in Descartes' case even the belief that he was so doing came to him from Plato; for along with Aristotle's dogmatic errors his sound teaching with regard to the derivation of knowledge had fallen into oblivion. The initial doubt of the *Discourse on Method* and the *Meditations* is also Platonic; only it is manifested under an individual and subjective, instead of a universal and objective form. But to find the real starting-point of Descartes' inquiries we must look for it in his mathematical studies. A geometrician naturally conceives the visible world under the aspect of figured extension; and if he thinks the figures away, nothing will remain but extension as the ultimate material out of which all determinate bodies are shaped. Such was the result reached by Plato in his *Timæus*. He identified matter with space, viewing this as the receptacle for his eternal and self-existent Ideas, or rather the plastic medium on which their images are impressed. The simplest spatial elements are triangles; accordingly it is with these that he constructs his solid bodies. The theory of triangular elements was probably suggested by Atomism; it is, in fact, a compromise between the purely mathematical and the materialistic methods. Like all Plato's fancies, this theory of matter was attacked with such convincing arguments by Aristotle that, so long as his physics remained in the ascendant, it did not find a single supporter. Even now, at the moment of his fall, it might have failed to attract attention had not the conditions under which it first arose been almost exactly repeated. Geometrical demonstration had again become the type of all reasoning; there was again a

sceptical spirit abroad forcing men to fall back on the most elementary and universal conceptions; an atomistic materialism again threatened to claim at least the whole field of physical inquiry for its own. That Descartes followed the *Timæus* in identifying matter with extension cannot be doubted; especially when we see that he adopts Plato's analysis of body into elementary triangles; but the theory agreed so well with his intellectual predispositions that he may easily have imagined it to be a necessary deduction from his own *a priori* ideas. Moreover, after the first two steps, he parts company with Plato, and gives himself up, so far as his rejection of a vacuum will permit, to the mechanical physics of Democritus. Much praise has recently been bestowed on his attempt to interpret all physical phenomena in terms of matter and motion, and to deduce them from the unaided operation of natural causes; but this is no more than had been done by the early Greek thinkers, from whom, we may observe, his hypothesis of an initial vortex was also derived. His cosmogony is better than theirs, only in so far as it is adapted to scientific discoveries in astronomy and physiology not made by Descartes himself; for where his conjectures go beyond these they are entirely at fault.

Descartes' theory of the universe included, however, something more than extension (or matter) and motion. If we ask whence this something more came, our philosopher will answer that it was obtained by looking into himself. It was, in reality, obtained by looking into Aristotle. To understand this, we must once more turn to the *Timæus*. Plato made up his universe from space and Ideas. But the Ideas were too vague or too unintelligible for scientific purposes. Even mediæval Realists were content to replace them by Aristotle's much clearer doctrine of Forms. On the other hand, Aristotle's First Matter was anything but a satisfactory conception. It was a mere abstraction; the unknowable residuum left behind when bodies were stripped, in imagination, of all their sensible and cogitable qualities. In other words, there was no matter actually existing without form; whereas form was never so truly itself, never so absolutely existent, as when completely separated from matter: it then became simple self-consciousness, as in God, or the reasonable part of the human soul. The revolution wrought by substituting space for Aristotle's First Matter will now become apparent. Corporeal substance could at once be conceived as existing without the co-operation of Form; and at the same stroke, Form, liberated from its material bonds, sprang back into the subjective sphere to live henceforward only as pure self-conscious thought.

This absolute separation of Form and Matter, under their new names of Thought and Extension, once grasped, various principles of Cartesianism will follow from it by logical necessity. First comes the exclusion of final causes from philosophy, or rather from nature. There was not, as with Epicurus, any anti-theological feeling concerned in their rejection. With Aristotle, against whom Descartes is always protesting, the final cause was not a mark of designing intelligence imposed on matter from without; it was only a particular aspect of Form, the realisation of what Matter was always striving after by virtue of its inherent potentiality. When Form was conceived only as pure thought there could be no question of such a process; the most highly organised bodies being only modes of figured extension. The revival of Atomism had, no doubt, a great deal to do with this result. Aristotle had himself shown with masterly clearness the difference between his view of nature and that taken by Democritus; thus indicating beforehand the direction in which an alternative to his own teaching might be sought; and Bacon had, in fact, already referred with approval to the example set by Democritus in dealing with teleological inquiries. Nevertheless Bacon's own attitude towards final causes differs essentially from Descartes'. The French mathematician, had he spoken his whole mind, would probably have denied their existence altogether. The English reformer fully admits their reality, as, with his Aristotelian theory of Forms, he could hardly avoid doing; and we find that he actually associates the study of final with that of formal causes, assigning both to metaphysics as its peculiar province. This being so, his comparative neglect of the former is most easily explained by the famous comparison of teleological inquiries to vestal virgins, dedicated to the service of God and bearing no offspring; for Mr. Ellis has made it perfectly clear that the barrenness alluded to is not scientific but industrial. Our knowledge is extended when we trace the workings of a divine purpose in nature; but it is not a kind of knowledge which bears fruit in useful mechanical inventions.¹ Bacon probably felt that men would not be very forward to improve on nature if they believed in the perfection of her works and in their beneficent adaptation to our wants. The teleological spirit was as strong with him as with Aristotle, but it took a different direction. Instead of studying the adaptation of means to ends where it already existed, he wished men to create it for themselves. But the utilitarian tendency, which predominated with Bacon, was quite exceptional with Descartes. Speaking generally, he desired

¹ *De Aug.* III. v. *Works* I. 571.

knowledge for its own sake, not as an instrument for the gratification of other wants; and this intellectual disinterestedness was perhaps another aspect of the severance effected between thought and matter.

The celebrated Cartesian paradox that animals are unconscious automata is another consequence of the same principle. In Aristotle's philosophy, the doctrine of potentiality developing itself into act through a series of ascending manifestations, supplied a link connecting the highest rational with the lowest vegetal life. The identification of Form with pure thought put an end to the conception of any such intermediate gradations. Brutes must either have a mind like ours or none at all. The former alternative was not even taken into consideration; probably, among other reasons, because it was not easily reconcilable with Christianity; so that nothing remained but to deny sensibility where thought was believed not to exist.

Finally, in man himself thought is not distinguished from feeling; it is, in fact, the essence of mind, just as extension is the essence of body; and all spiritual phenomena are modes of thought in the same sense that all physical phenomena are modes of space. It was then rather a happy chance than genuine physiological insight which led Descartes to make brain the organ of feeling no less than of intellection; a view, as Professor Huxley has observed, much in advance of that held by Bichat a hundred and fifty years later. For whoever deduced all the mental manifestations from a common essence was bound in consistency to locate them in the same bodily organ; what the metaphysician had joined the physiologist could not possibly put asunder.

We are now in a position to understand the full force of Descartes' *Cogito ergo sum*. It expresses the substantiality of self-conscious Form, the equal claim of thought with extension to be recognised as an element of the universe. This recognition of self-consciousness as the surest reality was, indeed, far from being new. The Greek sceptics had never gone to the length of doubting their own personal existence. On the contrary, they professed a sort of subjective idealism. Refusing to go beyond their own consciousness, they found in its undisturbed self-possession the only absolute satisfaction that life could afford. But knowledge and reality had become so intimately associated with something independent of mind, and mind itself with a mere reflection of reality, that the denial of an external world seemed to the vulgar a denial of existence itself. And although Aristotle had found the highest, if not the sole absolute, actuality in self-thinking thought, he projected it to such a distance from human personality that its bearing on

the sceptical controversy had passed unperceived. Descartes began his demonstration at the point where all the ancient systems had converged, but failed to discover in what direction the conditions of the problem required that they should be prolonged. No mistake can be greater than to regard him as the precursor of German philosophy. The latter originated quite independently of his teaching, though not perhaps of his example, in the combination of a much profounder scepticism with a much wider knowledge of dogmatic metaphysics. His method is the very reverse of true idealism. The *Cogito ergo sum* is not a taking up of existence into thought, but rather a conversion of thought into one particular type of existence. Now, as we have seen, all other existence was conceived as extension, and however carefully thought might be distinguished from this as absolutely indivisible, it was speedily reduced to the same general pattern of inclusion, limitation, and expansion. Whereas Kant, Fichte, and Hegel afterwards dwelt on the form of thought, Descartes attended only to its content or to that in which it was contained. In other words, he began by considering not *how* he thought but *what* he thought and *whence* it came—his ideas and their supposed derivation from a higher sphere. Here again the Platonic tendency is apparent. Having rejected the later Schoolmen, instead of making an advance on their teaching, he fell back on the realistic fancies of the earlier Schoolmen, especially St. Anselm. The mediæval doctor had inferred the existence of a supreme being (*quo nihil majus cogitari potest*) from the idea of such a being, through a quantitative comparison of the two, than which nothing more frankly materialistic can be conceived. Descartes, following on the same track, seeks, with still blinder confusion, to infer existence from the idea of perfection, just as the properties of a triangle are inferred from its definition, or again by assuming that the dynamical equivalence of a mechanical effect to its cause must obtain in a world where spatial relations and therefore measurement are presumably unknown. Such fallacies were impossible so long as Aristotle's logic continued to be carefully studied, and they gradually disappeared with its revival. Meanwhile the cat was away and the mice used their opportunity.

That the absolute disjunction of thought from matter involved the impossibility of their interaction was a consequence not drawn by Descartes himself but by his immediate followers. Here also Greek philosophy played its part in hastening the development of modern ideas. The fall of Aristotle had incidentally the effect of reviving not only the systems which preceded, but also those which followed his. Chief among

these were Stoicism and Epicureanism. Differing widely in most other respects, they agreed in teaching that body is acted on by body alone. The Cartesians accepted this principle to the fullest extent so far as human perceptions and volitions were concerned; and to a great extent in dealing with the problems of physical science. But instead of arguing from the laws of mechanical causation to the materiality of mind, they argued from its immateriality to the total absence of communication between consciousness and motion. There was, however, one thinker of that age who went all lengths with the later Greek materialists. This was Thomas Hobbes. But the influence of ancient ideas on his theories and on those of his successors, down to the time when it becomes indistinguishably mingled with other elements, must be reserved for a second and concluding paper.

ALFRED W. BENN.

V.—NOTES AND DISCUSSIONS.

THE PSYCHOLOGY OF MUSIC.

MR. SULLY, in his very cordial and generous review of *The Power of Sound* in MIND XXII., put forward certain objections in so clear and compact a form as to invite reply: and though I can scarcely hope here to make any positive addition to my side of the case, or to be more convincing in a brief Note than in a long book, there may be some advantage in embracing the views attacked in a succinct statement, and pointing out where and how (as it appears to me) the attack leaves the gist and strength of my arguments untouched.

Mr. Sully's main difference from me lies in his refusing to recognise the unique and independent character which I attribute to what I have called 'the musical faculty,' and the consequent impossibility of obtaining ultimate or even approximate explanations of its actions and verdicts, and of the more distinctive sort of musical impressions; 'the hopelessness' (to quote my preface) 'of penetrating Music in detail, and of obtaining, whether in objective facts of structure or in fancied analogies and interpretations, any standpoint external to the actual inward impression, from which to judge it,' from which to measure and account for its presentation in any particular case of a characteristic pleasure-giving quality. The faculty to which I refer the perception of this quality Mr. Sully regards as an "unnecessary *deus ex machinâ*," brought in to cut the knot of an æsthetic problem admittedly complex and difficult, but likely (he thinks) to yield, without any such hypothesis, to the further progress of psychological investigation.

Now I must observe, to begin with, that there is a sense in which, and a point up to which, the 'faculty' and its uniqueness and independence would, I can hardly doubt, be admitted by Mr Sully; and that for an immense amount of the various positions and arguments connected with it in my book (*e.g.*, in respect of the relations of Music to the other arts, and of its popular possibilities), that sense would be amply sufficient. Quite apart from abstruse psychological problems, and simply taking 'musical faculty' as I have defined it, to denote *the ability to construe and enjoy a number of successive tones as a unity or single and recognisable bit of melodic form*, it is merely a name for a particular power which two persons, alike in all other respects of taste and temperament, may differ by the whole extent of possessing in perfection and not possessing at all. And in the broadest and most obvious of all musical facts, the impossibility of connecting the possession of this faculty with any other particular characteristics, moral, intellectual, or even artistic, a uniqueness and independence of a very remarkable kind is surely established. For this remarkable fact, which belongs not to scientific research but to the most ordinary observation, I find a basis (and an explanation, so far at any rate as

things are explained by being referred to something more ultimate and fundamental than themselves) in that more precise view of the uniqueness and independence of the musical faculty which results from a careful examination of the exact work it performs, of the characteristics of the special 'forms' with which it deals. Each of these forms consist of a particular set of accurate *time*-measurements fused into combination with a particular set of accurate *pitch*-measurements, of which latter the ear *alone among the senses* can take cognisance. Here again I do not understand Mr. Sully to differ from me. In the sense and in the degree in which these proportions of melodic form differ essentially from all visual and tactual proportions (for the proof how complete the difference is I must refer to my 7th and 8th chapters), in that sense and in that degree the faculty which takes cognisance of them has a unique and independent character. There need be no more difficulty in admitting so much than in admitting that the *rationale* of tone-relationship propounded by Helmholtz finds no parallel in connexion with the eye or the other sense-organs.

But now we come to the point of parting. Admitting (as I imagine he would) the uniqueness and independence up to the point indicated, Mr. Sully would still refer the characteristic pleasure of melody to discovered or discoverable laws and conditions lying outside of the particular operations in which the faculty follows and surveys the proportions presented to it. To him the uniqueness and independence of the faculty are not of so fundamental a sort, but that the most characteristic and individual effects of its exercise may be shown to have their root and essence in something more general than itself, in regions of idea and emotion external to that exercise, and which that exercise is a mere means of presenting or representing; the various actions of the faculty, as brought to bear on the various objects presented to it, being in fact but the turnings on of so many taps to these various reservoirs, where the act of turning is simply a *means*, and contributes no essential and independent ingredient to the *æsthetic result*.

Now, in respect of their *general influence* on Music, I have attached very great importance to those external regions of idea and emotion on which Mr. Sully dwells: but I am unable to connect them as he does with what I have called the *most characteristic and individual effects* of Music; and I proceed now briefly to develop what I mean by these italicised phrases. For it is just in this distinction between the *general* and the *individual* qualities of Music that the kernel of the difference between Mr. Sully and myself lies: in this distinction also lies the key of my whole argument: and I have therefore no resource but to try to suggest in a few pages what it needed as many chapters properly to elucidate.

I have urged again and again (especially in my 5th and 10th chapters) that the central fact and problem of Music lies in the *shortness* of the melodic forms in which the maximum or minimum of beauty may appear; in other words, in the extraordinary difference of pleasure-

giving quality which, to any given person at any given time, may be presented by two bits of form each comprised within the narrowest limits. Till this fact is faced, it is worse than useless to go on and imagine we are getting nearer to the root of the matter by consideration either of the sensuous effects of mere sonorous impression on the nervous system, or of the artistic aspects of large compositions, such as their wide variety, happy contrasts, finely balanced parts, and so on.¹ And the fact, in itself so startling, has at any rate the advantage of giving us extremely definite touch-stones by which to try the various explanations of melodic impressiveness which have been offered. If any proposed explanation fails hopelessly when confronted with this central fact; if its terms are found to apply equally to two forms which differ by the whole extent of giving consummate pleasure and giving no pleasure at all; it cannot be in any way what it professes to be, *viz.*, an explanation of the pleasure.

Of such professed explanations three stand out pre-eminent:—(1) that of discoverable points of structure, whether in matter of order and symmetry or of freedom and contrast, which may be connected with recognised general laws; (2) that of suggestion of physical movement or of physical impulse; (3) that of suggestion of the cadences of emotional speech. I must be satisfied here with the briefest reference to the arguments and examples by which I prove (as I conceive) the utter inadequacy of all of them.

First, as regards order and discoverable principles of adjustment, there are of course certain conditions of orderly structure which must be observed under pain of producing incoherent gibberish; but in Music these are so wide as to cover similarly the very cases whose felt difference is the thing to be accounted for. No induction of points of structure will yield us any law or laws, external to the single unanalysable impression in each case, which shall serve to separate successions of tones which give pleasure from others which give none. In my 9th chapter I have shown how little the element of order displayed in the *material* of Music, in tone-relationships and scales and so on, will account for degrees of beauty in melodic 'free forms'; and in my 8th chapter I have given instances of pairs of such forms, good and bad, in not one of which 'is a single technical point presented which could be for a moment mentioned as differentiating the good from the bad, or forming the slightest basis for an induction on the subject. Nor are the words *good* and *bad* here meant to refer to any

¹ It may save confusion to point out that in discussing the characteristics of these aspects of musical timbre and of large structure, and their respective relations to the short individual and closely organic combinations in which I find the fundamental fact of the musical art, I have frequently called the former *general* as compared with the latter; but that the general, opposed to the individual, characters discussed in this Note are those found in the *short combinations themselves*, and are such as, translated into the domain of vision, *e.g.* of faces, would amount to the possession of human features and expression, as distinct from the possession of beauty or special pleasure-giving quality.

acknowledged classification. Any individual, whatever his taste, who among the tunes he knows discriminates those which give him pleasure from those which do not, will find it entirely hopeless to form any generalisation of structural features which are present in the former and absent in the latter'. On this point Mr. Sully says: "The element of order in one of those vulgar and wearisome tunes which Mr. Gurney rightly despises after all counts for something, as might at once be seen by contrasting it with an unordered sequence of notes". Of course it counts for something, in the sense that it is a condition of the notes being comprehensible, construable as a unity; but being found in forms which are either neutral or negative as regards pleasure-giving quality, I fail to see how it can count for anything whatever as a distinction between the pleasurable and the non-pleasurable.

So much for *orderliness* of structure: as regards *freedom* and *contrast*, I must refer for my own views to my 10th chapter, §§ 8 and 9, but must devote some words here to Mr. Sully's criticism. Among the conditions of the "distinguishing beauty" of "admittedly beautiful melody," he says that "something may be set down to discoverable elements of form, as that very freedom which Mr. Gurney appears to look on as something inexplicable. The charm of a good deal of the best music is due, and is consciously referred, to some striking departure from familiar directions, which however is at the same time not otherwise disagreeable. It is curious, by the by, that in an art which owes so much to a perception of individual freshness, Mr. Gurney nowhere assigns any æsthetic value to the humble quality of novelty." In saying that I assign no æsthetic value to novelty, Mr. Sully can hardly mean that I have not dwelt sufficiently on individuality or novelty as a *characteristic* of fine musical motive, that being a point which I have very specially emphasised.¹ All that he can mean is that I do not regard the freedom and novelty felt in such motives to be properly an *explanation* of their effect. I certainly do not; it is part of the effect to be explained, or as I think *not* to be explained. It is a quality which can be perceived and judged of *only from within* the action of the musical faculty in following and surveying the particular set of proportions. Precisely what has been said in reference to the pleasure-giving quality in general applies to this particular sub-quality. No look of notes on music-paper, no analysis of structure, no computation of numerical relations, will establish any sort of condition or set of conditions applicable to combinations which present freedom and novelty, and not to others which

¹ To quote two instances out of many—"The forms, when they occur, and so far as they are impressive, are each new and unique things, not like new expressions or postures, or alterations and reminiscences, of known things: each fresh melodic presentation which is profoundly felt is felt as till then wholly unknown". "The primary requisite, both in simple and elaborate musical work, is that it shall contain motives of individuality as well as beauty; for of Music more truly than of anything else may we say with Bacon "there is no excellent Beauty that hath not some strangeness in the proportion"."

present triteness and tameness of movement. If in a sense it is legitimate to say that a motive is beautiful *because* it is free and novel, we then immediately ask, Why do we call it free and novel? and the only answer is that the musical faculty finds it so. When Mr. Sully goes on to speak of beauty as "guaranteed when the degree of agreeable divergence from the common run of compositions reaches a certain height, provided always that it is in itself a worthy and sufficiently complex result," the words scarcely look as if he were keeping steadily before his imagination the typical case to the test of which I must insist on bringing, in the first instance, every explanation of melodic beauty, the case of perfectly short and simple forms. Where and what is the "agreeable divergence" or the "striking departure from familiar directions" in *Dove Sono*, or in Schubert's *Forelle*, with its perfectly naive and obvious strains, such as a child might pick up in a moment, and its simple alternations of tonic and dominant harmonies,—a tune of absolute commonness, were it not that the musical faculty pronounces it of extraordinary rarity?

In respect of structure, then, of discoverable principles of order or of freedom under conditions of order, we do not get an explanation even in that most limited sense of inductive laws shown by observation to embrace and coincide with the pleasure-giving cases; much less a true explanation of their peculiar pleasure-giving quality. Next as to physical movement. Mr. Sully says: "I do not see that Mr. Gurney's idea derives much support from the contention that the ideal motion of music is something *sui generis*, for surely there is some analogy between the form-yielding motion of music and the form-yielding movement of an object in space". I have devoted much space to an examination of the analogy of musical movement both to bodily movement and impulse and to external movement in space, and of all that it involves. What it does *not* involve is, most clearly, the solution of our central problem—why, namely, of two brief combinations of notes which are exactly on a par in respect of this analogy, one gives the maximum of pleasure and the other none at all. In the present instance I need not dwell further on this fact, as it is not as specially bearing on that central problem that the topic is introduced by Mr. Sully; but its bearing on the uniqueness of the musical faculty cannot be altogether passed over. I have, in my 8th chapter, attempted to show how little the movement of an object in space can be truly called 'form-yielding,' in comparison with melodic movement. I can quote but a single fragment. 'The progressive form, the Ideal Motion, of which each step is necessary to the whole—which is organic by dint of the relation of each component part to others, some of them separated from it by a very appreciable interval of time and, it may be, by a large number of intervening units of tone—is wholly due, as we have seen, to the fusion with *rhythm* of the *pitch*-element in which tone-relationship is the all-important feature. This is the sort of form, unchangeable in each case, along which we pass in glad compulsion. No similar necessity, no true organism, could ever be discerned in the sequence of movements of

the Professors' (Professors Perry and Ayrton's) ball, however graceful and various. The eye might have its negative requirements, and resent irregular angularities of direction and violently sudden changes of pace; but the positive faculty of linking a long series of the swiftly vanishing impressions into a unity, that faculty which the unique sense of tone-relationship alone makes possible in the case of the ear, has no possible analogue in the case of vision, in the absence of any similar means of correlating the elements of a visual series'. This being so, I do not see how any one can deny the faculty to be *sui generis*, unless he is prepared to contend that other faculties than the musical, or other senses than the auditory, can take cognisance of pitch-relations. The musical faculty is at any rate *sui generis* to the extent of apprehending and alone apprehending this sort of motion; and Mr. Sully seems here to be implicitly denying it that amount of uniqueness and independence which at the beginning of this paper I credited him with accepting, and which seems necessarily involved in the simple fact that A picks up and remembers a tune which to B is a mere fortuitous succession of sounds. The same remark applies to his next sentence: "Nor do I think that the idea of a unique faculty is greatly aided by the supposition of a special cogency in musical sequence, which I suspect is very much a matter of custom general or special (where the melody has become familiar), and depends on the fact, too lightly touched on by Mr. Gurney,¹ that melody is essentially a response to a continually renewed attitude of expectant attention". I should find here, no doubt, a more particular point of difference if Mr. Sully means that the cogency of a fine motive may not be felt quite as much on the first as on the twentieth hearing; for by *cogency* I simply mean the sense that alteration either of notes or rhythm would destroy the individual organism. But so far as this is accepted, it connects itself with a sort of uniqueness in the apprehending faculty which I should have thought indisputable, whatever view might be taken on that further question of the influence of external references which I have regarded as the chief one in dispute between Mr. Sully and myself.

To return now to that question, the remaining region of external reference which awaits discussion is that of Speech. Here again, as in the case of physical movement, I have carefully dwelt on the *general* influence of Speech on Music. To quote only a few sentences, I say that though 'every argument based either on structure or feeling confutes the idea of special relationships between the actual progressions of sound in the two cases,' yet 'the *general* bearing of speech on melody is none the less important; to it is due the vivid effect, which a fine melody produces, of being *something said*—a real utter-

¹ It would be absurd to complain of a critic, especially so candid and conscientious a critic as Mr Sully, for not recalling every sentence in a long book. But as a matter of fact I have more than once emphasised this particular point, and have included it (p. 175) in my list of the seven chief general characteristics of melody.

ance of transcendent significance. So prominent is this characteristic, that the impulse to project some sort of personality behind melodic strains seems absolutely irresistible. . . . The fact that I seem to myself to use that word' (*utterance*) 'in a literal and not a metaphysical sense in respect of melody, is an instinct which I cannot get behind, and which can only be entirely realised by those who share it. A splendid melodic phrase seems continually not like an object of sense, but like an affirmation; not so much prompting admiring ejaculation as compelling passionate assent. The delusion, if delusion it be, seems quite explicable by the general association with speech,' and so on. But in this instance of speech, I have gone much beyond the admission of this most general influence. Though in my chapter on 'The Speech-theory,' I have opposed to the utmost Mr. Spencer's view of a close and special connexion between musical cadences and speech-cadences, on which he bases the whole emotional effect of Music, I have attributed to speech a large share of the production in Music of definite nameable expressions, as tranquil, vivacious, capricious, and so on. Mr. Sully says: "Mr. Gurney's argument against Mr. Spencer is, I think, conclusive up to a certain point. Undoubtedly the resemblances between music as we know it and speech are not close; undoubtedly different kinds of emotional speech sometimes have the same musical qualities. Nevertheless this does not disprove the contention that, in a general way, music represents vocal utterance (a fact indeed which Mr. Gurney concedes); or that a particular melody tends to call up certain groups of feelings rather than others." I agree with the second member of the last sentence quite as much as with the first (which indeed I should word much more guardedly). I have devoted a long chapter (chap. 14) and many examples to the elucidation of these 'groups of feelings,' and of the definitely *expressive* qualities of music. It is true that I have referred these qualities not so much directly to *speech* as to facts of physical *impulse and gesture*, these being of a more universal and fundamental nature. But not only have I (at the end of the chapter on 'The Speech-theory') given speech special credit for certain more or less definite sorts of effect, in connexion with which I would fully accept Mr. Sully's description of musical beauty as 'often inextricably bound up with obscure suggestions of feeling' (i.e., of feeling knowable and nameable outside Music); but I have said—"All those features of physical motion mentioned in the 14th chapter as having their counterparts in Music, which, as we saw, is able to suggest definite emotions so far as physical motions are themselves expressive of such emotions, may naturally be presented in speech. And the connexion of Music with the presentation of them in speech is naturally exceptionally close. For first, in the use of language under emotion there is not only the varied play of energy parallel to that which may be manifested by muscular exercise of other sorts, but this varied play takes effect in the actual material of Sound, and so obtains the widest and easiest channel for association with the art of Sound. And secondly, speech stands apart from other physical modes of expression

in having normally a large amount of *continuity*, and so on. But all this opens up no sort of connexion between speech and our central musical problem, which concerns a pleasure-giving or distinctively *impressive* quality present in multitudes of cases where definable *expressive* quality is either absent or present only in the widest and vaguest way. The proof of this would only suffer by fragmentary quotation; but I shall certainly be disappointed if any reader of my chapter on 'The Speech-theory' remains unconvinced on two fundamental points: (1) the general futility of attempting to connect *in detail* melodies—genuine organisms the separate intervals and fragments of which give no more idea of them than a number of scattered bricks gives of a building, and might equally occur in melodies of the most diverse characters—with 'that infinite and indefinite medley which, under the name of "cadences of speech," we find talked of as a set of universally recognised successions of tones, appropriated, one apiece, to every shade of feeling we ever experience'; (2) the hopelessness of getting any explanation of the individual pleasure-giving effect of melodies from the *general* qualities (loudness, rapid variation of pitch, width of interval, &c.) on which Mr. Spencer dwells; as proved by the facts that 'the effect (α) may be absent in the presence of all his conditions, (β) may be present in their absence'.

We have thus glanced at the three suggested bases of melodic beauty, one having to do with structure and order, the other two with suggestions of concrete external phenomena, movement and speech; and in none of the three do we find anything which will mark off for us those successions of tone which have, from those which lack, the particular quality presented as our central problem; the quality of producing, for any particular individual at any particular time, a particular impression, of which in innumerable cases no more precise description even can be given than that it is in a unique way agreeable. So far as any reader of my book is led to agree with me so far, I do not think he will feel the following further argument of Mr. Sully to be truly applicable:—"I think then that we are in a position to divine vaguely and imperfectly where the characteristic beauty of different compositions lies. Mr. Gurney's ably developed argument is really telling only against the mere formalist who holds that all beauty is resolvable into universal principles of form, and against the mere idealist who asserts that suggested emotion exhausts the mystery of musical charm. As against one who thinks that musical beauty is too complex a product to be explained by any one principle and depends on a subtle blending of many distinct influences, his argument looks very much like a fallacy of composition:—The charm of music is due neither to this, that, nor the other cause: therefore it is not due to all taken together." Recalling the fact that I am beginning at the beginning and dealing with the charm of distinct and short melodic forms, for which the vague general phrase 'charm of music' is a very equivocal substitute, I need only slightly expand Mr. Sully's last sentence, to be able to endorse it without laying myself open to any charge of fallacy:—I take two melodies, A with charm,

B without ;¹ and I say, the charm of A is not due to order, for B is equally orderly ; nor to suggestion of physical movement, for B bears just the same analogy to physical movement ; nor to suggestion of speech, for B is just as suggestive (or unsuggestive) of speech : therefore it is not due to all taken together. What it *is* due to (primarily at any rate) is the fact that the notes in A go one way and the notes in B another ; that A presents one set of sound-proportions, and B another, to the single faculty which can judge of such matters ; so that however much such a faculty may be *deus ex machina*, it can hardly be deemed "unnecessary". Rejecting this simple hypothesis that the exercise which constitutes the *perception* of melodies as forms or unities has also a prime share in the *appreciation* and *enjoyment* of them, Mr. Sully finds what serves him at once as a solution of the problem, and an excuse for the impossibility of making good its application to particular cases, in the *number* and *complexity* of the elements to which he would refer the enjoyable effect : yet this bewildering host of subtly-fused ingredients turns out, when looked at, to reach the not very formidable number of three, which moreover are almost as easy to test as to count, and certain (if I am right) to be rejected on testing.

A few words must be added as to that single range of extra-musical association to which I have allowed high value in connexion with the characteristic melodic pleasure ; that, namely, which appears in Mr. Darwin's theory of the primeval use of Music under conditions

¹ Mr. Sully thinks that I draw a too hard and fast line between beautiful and unbeautiful music. "To the scientific psychologist," he says, "there is no such distinction. Beauty is nothing but a special accumulation of pleasurable elements, and passes into the simply pleasant by insensible transitions." It is, as Mr. Cycles has well said, a massing of grateful impressions." This last point is certainly very generally true ; though I must remark that a beloved melody has a most singular power of *seeming* simply intense without suggesting any complex massing of various elements of effect ; and though I must persist, as shown in the text, in rejecting the actually suggested elements *en masse* quite as much as separately. But as regards the hard and fast line, in the case of multitudes at any rate it persists in drawing itself, for each individual, between certain bits of music which at a particular stage of his development give him the characteristic pleasure and those which do not. In dwelling on these cases, simply as being those which present the problem clearly and decisively, I in no way deny the existence of an enormous number of other bits, pleasurable in various degrees, which would bridge over the gap between the extremes. Nor do I see how my position is invalidated, as Mr. Sully thinks it is, by the fact of wide differences in the scope and in the verdicts of the musical faculty in different individuals. Till we can in some way see round it, and trace (as we never shall trace) its innermost connexions with the organism, I do not see what right we should have to expect entire similarity in its operations ; though I must add that with persons of 'good ear' who have had similar chances in the way of becoming early familiar with the same music, the similarity of perception and taste in this region is often quite exceptionally close, in spite of wide difference in all other respects of character and intellect.

of sexual excitement, and its consequent transfusion with highly exciting emotional elements. As to this Mr. Sully says: "Is it not surely more philosophic to say that the more recent yet far extending ages of human converse with their vast accumulation of emotional experience must have had at least as much effect on music as the very remote and at the same time limited experiences of love-making among our pre-human Jubals? Mr. Gurney may say that the link of association is distinct in the two cases. But one may still ask whether the pleasure given to some anthropoid ape by the exercise of his embryonic musical faculty can easily be supposed to resemble in quantity or quality the pleasure given to a fully-developed modern ear so closely as to account for the wonderfully far-reaching transmission of emotional effect." But he is here scarcely putting himself at my point of view. The reason that I can accept Mr. Darwin's suggestion is that I think it possible (though extremely difficult) to connect it with that discriminating and autocratic character of the musical faculty, which is to me so prime a fact both of experience and of inference. But for this, Mr. Darwin's theory would be open (as he himself has most candidly admitted to me) to the very same objection that I have found to Mr. Spencer's and the other hypotheses we have been considering; namely, that its *generality* wholly precludes its meeting our point—that it could at most only help us to see why Music is emotional (which it too often is not), and not the least why certain progressions of sound are felt as having a particular pleasurable quality unfelt in others. I do not quite feel the weight of Mr. Sully's remarks about the remoteness of the suggested source; or rather, feeling their weight, I still feel that it represents only the kind of imaginative effort which in our day is being perpetually demanded of the evolutionist; for we are surely now familiar with the notion of the enormous remoteness of the time, and the crudeness of the material, from which our various mental faculties have been developed and sublimated. I have explained (in my 6th and 14th chapters) in what way I think the remoteness and crudeness in this case even favourable to my application of the hypothesis: here I can but refer again in passing to that particular fact of musical emotion which was prominent in our discussion of the musical faculty, and in which, though Mr. Darwin (being professedly unmusical) has not mentioned it, the real relevance and explanatory power of his facts seems to me to lie; the fact, namely, that 'Music is perpetually felt as strongly emotional while defying all attempts to analyse the experience or to define it even in the most general way in terms of general emotions'; that it presents 'phenomena charged with feeling, and yet in whose most characteristic impressiveness separate feelings seem as fused and lost as the colours in a ray of white light'; which is 'precisely what is explained, if we trace the strong undefinable affection to a gradual fusion and transfiguration of such overmastering and pervading passions as the ardours and desires of primitive loves,' and so on. And remembering Mr. Darwin's case of the gibbon, I see no objection to supposing the enjoyment taken in note following note by

our semi-human ancestors to have been akin, however little comparable in degree, to our enjoyment of note following note in a modern 'subject,' the embryonic strain containing in embryo that element of *musical order* which is characteristic of the developed one and is conspicuous by its absence in speech.

But while I do not fully share Mr. Sully's exact difficulty on this subject, I do find a difficulty, in the application of Mr. Darwin's theory, of the most serious kind which has never I think been recognised; or more precisely speaking, what has not been recognised is that Mr. Darwin's idea can be brought to bear on what I have called the central problem of Music only by a mode of application which involves this difficulty. For its discussion I must refer to my 6th chapter § 7: put in the briefest way, it lies in the process by which contact with the emotional spring suggested by Mr. Darwin can be supposed to be made and broken in the cases of impressive and unimpressive melody respectively. 'There is this fundamental distinction between the relation of Association to form in the visible and auditory regions, that in the former it is prominently connected with *special forms* (notably, *e.g.*, with the contours of faces and figures), while in the latter it' (*i.e.*, the particular and all-important range of association suggested by Mr. Darwin) 'is connected with a *special mode of exercise*,' that of the musical faculty, and *not* with any definite melodic forms common to us and our semi-human progenitors. We have to attribute to this faculty an independent view, an independent power of being satisfied, a discriminating sense of proportion in virtue of which one bit of its exercise proves immeasurably superior to another, while holding at the same time that the satisfactory result is *not felt* in independence of the emotional flow from the associational source to which it opens a passage, and to which the satisfactoriness or impressiveness *as we know it* should be mainly due. This difficulty, I confess, seems to me only less than that of leaving Mr. Darwin's suggestion on one side.

There is one subsidiary topic on which Mr. Sully again seems hardly to meet my point. In reference to my statement (in my 1st chapter) of the great difficulty which exists in accounting for the extraordinary delicacy and complexity of the auditory apparatus, whether by direct adaptation or by natural selection, he says that as regards the latter I seem slightly to overstate the case: since, "in the case of man at least, it may be plausibly contended that the perfect discrimination of vocal sound as to its quality or timbre and general level or height, even of the rough and constantly shifting sound which seems to characterise primitive speech, would involve an organ for the discrimination of pitch"; and "among all gregarious and social species endowed with a vocal organ . . . the structures supposed to be specially concerned in the perception of musical quality would tend to be evolved by natural selection". But he does not notice the important argument of Mr. Spencer of which I have quoted some sentences, and which I have never seen in any way answered. The argument is that 'as fast as essential faculties multiply, and as fast as the number of organs that

co-operate in any given function increases, indirect equilibration by natural selection becomes less and less capable of producing specific adaptations, and remains fully capable only of maintaining the general fitness of constitution to conditions'; and again 'as fast as the number of bodily and mental faculties increases, and as fast as the maintenance of life comes to depend less on the amount of any one, and more on the combined action of all, so fast does the production of specialities of character by natural selection alone become difficult'. I have given my reasons for holding that the delicate discrimination both of colour and pitch must be referred to an epoch when this argument would have its full strength. Speculation in those conveniently remote regions seems to me often scarcely to realise what it is about, in invoking the whole machinery of natural selection for minute changes of all sorts, at stages of development sufficiently advanced to make the invocation of the principle even for some very decided improvement of a *single* organ decidedly unsafe.

EDMUND GURNEY.

ARE WE "CELL-AGGREGATES"?

In his address at the International Medical Congress, Professor Huxley emphatically professed the biological doctrine known as the Cell-theory. He declared it to "constitute a permanent acquisition to physiological science"; and, very likely, there was not one among his distinguished audience who did not echo this faith.

It is no wonder, then, that an undistinguished investigator should find it rather hard to gain a calm and patient hearing, when his solitary voice is raised against the unanimous verdict of the most competent judges, from all parts of the civilised world. Indeed I should despair of ever establishing the deeper view of life and organisation, which, I believe, my studies have disclosed to me, if I were not convinced that a more faithful interpretation of nature must eventually displace a less faithful one. Leading biologists are naturally so occupied with work of their own, that they can rarely find time to gauge the results of novel researches, especially when they tend to give a new foundation to their science. However assured I may feel, that competent experts—if such could be induced to take the trouble to verify my researches—would, at last, be forced to give their assent to my conclusions, I have but little hope that this task will be undertaken for some time yet. But, leaving my own doctrines for the present out of sight, I claim as a right from philosophical biologists, however busy, a few moments' attention to the objections against their own theory, which, after years of laborious preparation, I have made known in this Journal (Nos. XVII., XIX., and XX.), and in the *St. Thomas's Hospital Reports* for 1879. Disentangling the most fundamental and obvious of these objections from all other matter, I venture to assert, that in a very few minutes I can incontrovertibly

prove to all those who consider the cell-theory the foundation of biological science, that they have built their house on sand. Any consistent thinker, who will summon up courage and fairness enough squarely to face the brief critical remarks which I am about to make, will, I believe, never after confidently proclaim himself a "cell-aggregate brought into harmonious action by a co-ordinative machinery". To reason and to common-sense alike, the conception is preposterous, and seems very obviously to betray what mere novices we are, as yet, in our scientific interpretation of life.

From the stand-point of the cell-theory, a "cell" is an elementary organism, an autonomous physiological unit. This is to say, that all vital actions of which it is capable take place within its own circumscribed individuality. They are intrinsic displays of its own properties. From *outside*, a "cell" can be vitally influenced only through stimulation and nutrition. Stimulation incites the display of its inherent functional capacities, and nutrition furnishes the material for its growth, repair, and reproduction. It follows therefrom unambiguously, that one "cell" can influence the life of another "cell" only as a stimulus, or as nutriment. These two modes of relation afford the only ways of vital intercommunication that can at all obtain between "cells," no matter what their number and what the special configuration framed by their grouping. The functional activities of all the billions of "cells" that are thought to make up one of the higher organisms, have thus to expend themselves intrinsically, each "cell" keeping its own vital performance all to itself, no other "cell" being able in the least to profit by the internal work of its co-partners. Any kind of summation or combination of the vital energies of a number of "cells" is a bare impossibility. Let a "cell," for instance, contract to its utmost, and its contraction cannot in any way intensify the utmost contraction of another cell, which we will suppose it has stimulated to action. Each physiological unit, being in itself a rounded individuality, has irreparably to enjoy in intrinsic solitude its own vital activities. Under such conditions there can exist no living medium, in which the functions of many "cells" can impress a compound effect or resultant energy. We have nothing but an aggregate of individual units, each separately reacting, by dint of its own indwelling vitality.

How then is to be conceived the mysterious "co-ordinative machinery formed by some of the cells" of the vital aggregate, composing a higher organism? We find in nature a joint-effect of contractile elements actually accomplished by the interposition of rigid bodies, such as tendons and bones, to which they are mechanically attached. These connecting media do not function in relation to muscular fibres as aggregates of so many living individuals, but only as coherent masses of solid material, vitally unaffected by the contractile elements, during the combination of their respective motions. Here in muscular activity, where we have seemingly before us a number of separate physiological units, the vital irritability and reaction of the combining medium had to be suppressed to render it fit to become

"co-ordinative machinery," to make it at all possible for a multiplicity of living units to co-operate with each other in a joint-effect. But the joint-effect as such, mechanically operated, could result only in a mechanical, not in a vital action. That which, nevertheless, remains vital in the concerted movement of the many contractile elements, is to be found on the other side of the motor arrangement, where the vital stimulus sets co-ordinatively going the activity of just so many fibres, for just this or that purpose. It is unmistakably through the nervous system that this kind and indeed all other kinds of vital synthesis are effected in higher organisms.

The task is to conceive the synthetical process from the point of view of the cell-theory. For this end we have necessarily to imagine an unbroken string of adjacent "cells," connecting the contractile elements with the one or many points, at which the initial stimulus is imparted. A "cell" can propagate a vital action only by inciting to function the *vis insita* of the adjacent "cell". It can influence in no other way, but as a stimulus, the vital activity of its neighbour. Take then as initial stimulus a prick of the skin, and you will require an unbroken file of adjoining "cells" to convey the stimulus from the skin, through the nerve-centres, to the muscular fibres, that are made to contract in consequence. This indispensable desideratum of cell-physiology is conceived as actually realised in nature by an interlocking system of nerve-cells and nerve-fibres, which latter are also considered cells, or parts of such. The entire nervous system has, in accordance with this view, to be conceived as composed of nothing but a web of such definite and most complex cell-connexions, having its beginning at the surfaces where external stimuli are received, and terminating in contractile elements.¹ It is clear that the sole effect of such a "co-ordinative machinery" can abut in nothing but the mass-motion of a definite number of muscular fibres, in obedience to stimuli externally initiated at definite points of the organism. And this is, apparently, what is actually experienced in so-called reflex-action—a propagation of stimulus and nothing more. In fact, nothing more, according to the cell-theory, can anyhow be demanded. For, under a co-operative arrangement of the kind here assumed, the intrinsic vital activities of the nerve-cells subserve only the purpose of forwarding the initial stimulus and of multiplying the same in definite directions. The vital commotion produced by stimulation in one "cell" can have no other effect on its neighbour or neighbours, than to incite a similar vital commotion also in them. The vital commotion of the "cell" can have no significance as such, so far as *co-ordinative activity* is concerned. If nevertheless it means some inward experience to the "cell" itself, its neighbours can never become aware of it. A "cell" cannot possibly impart this inward experience as a stimulus, or as nutriment, to any other physiological

¹ I leave out of consideration secreting and excreting apparatuses, as these belong to the "commissariat" and scavenger department, having merely to prepare and supply nutriment, or to remove waste-material.

unit. If a "cell" constitutes an individuality, it has to pay with absolute inward seclusion for the privilege of its autonomy. This is irrefragably certain, and the consequences of it cannot be slighted or evaded by serious thinkers. If science is to its votaries a grave and weighty concern, and not a mere pastime, we are standing here before its most momentous problem.

Only through mental realisation of the modes of existence of other beings, can the spell of individual isolation be broken. Only as a perceiving "monad," could a "cell" representatively participate in the inner life of another "cell". Have we then the remotest reason to look upon nerve-cells as so many perceiving monads, each realising perceptually more or less fully the inner life of other "cells"? Who of the cell-theorists, at the present day, will be found willing to adopt this conclusion, and to undertake the explanation of our mental life in accordance with it? Yet if the cell-theory is persisted in, this is exactly what it owes to us, unless indeed it be conceded that nerve-cells experience no inward realisation at all, that the entire nervous system is merely there as "co-ordinative machinery" to set muscles in motion.

To us it matters really not one jot whether our nerve-cells, if such we have, do possess inward experience, or not. Our consciousness is clearly not their consciousness. Our *I* cannot be possibly composed of any *we* of theirs. In irrelational solitude, each of them has to enjoy for ever its inner life utterly incommunicable, utterly exclusive. There can be, as we have plainly seen, no vital synthesis of their sundry intrinsic activities. No vital cell-medium is at all conceivable, in which their respective inward experiences could be combined as joint-effect. Their individual functional commotions, if at all accompanied by feeling, have to ring out separately without power of ever sensorially or inwardly influencing each other's lives in the least degree. The billions of cells of which the organic being, as a "cell-aggregate," is thought to be composed, are just so many *elementary* organisms, with just so many *elementary* functions, with just so many *elementary* unrelated sensorial experiences, if at all endowed with feeling.

Our inner life, on the contrary, consists of a unitary synthesis of most complex and diverse relations to other beings. It can therefore have nothing whatever to do with the many and primitive lives of nerve-cells. If, as we are all positively convinced, the nervous system is nevertheless subservient to our sensorial and other mental experience, it certainly cannot be so by dint of the inner lives or sensorial experiences of its "cells". The only conclusion to which the cell-theory here necessarily leads is, that the specific vital commotion of nerve-cells must be construed as stimulating a unitary, hypervital substance to those activities which we call our mental life. Indeed there have to be hypostatized *in vacancy* the virtues of exactly such a substance, as I, in my counter-theory, have conceived the nervous system itself actually to be. The initial points of sensorial stimulation, instead of being situated at the sensory inlets, would have to be

shifted to where the central "cells" have to impart their sundry specific commotions as stimuli to a mental substance. Under this arrangement nerves would be "field-telegraphs" indeed, but the "head-quarters" and the central telegraph-operators would be found nowhere within the confines of this world.

It is only want of insight that has hitherto prevented spiritualistic reasoners from utilising, as a solid basis of operation, these inevitable conclusions of our present biological science. I would earnestly recommend to them the serious study of biology. The science, that has of late so discomposed the even tenor of their thought, is now once more at their mercy. It is open to the humiliating taunt that, setting out with the avowed aim to explain life physically and chemically, it breaks down before ever reaching physics and chemistry. With the full mystery of vitality still on its hands within its units, the "cells," it fails even then to put complex life together out of the vital material it assumes. It is in the power of those who believe in a hypervital substance of mind, to force upon biologists the consciousness of their shortcomings. Let them render this one service to our science, and I will promise not too closely to examine the material with which they themselves are sure quickly to bridge over the biological gaps.

But what, it will be rejoined by scientists, can this railleury avail when the microscope actually proves to us that we are made up of cells and nothing but cells? If spiritualism is the necessary outcome of this positive state of things, then, whether we like it or not, we shall have to accept our telegraphic function, and purely mechanical mission in this strange world of ours. From this painful dilemma, into which we are driven by the cell-theory, a very few plain considerations will suffice to deliver us; for they will show that we are not at all microscopically composed of "cells". To begin with the muscles. A muscular fibre is considered by all biologists to be a physiological unit. Will any histologist then maintain that a striped muscular fibre is made of a single "cell"? On the contrary, many embryological "cells" become somehow fused together in its composition. But a single striped muscular fibre is not really a physiological unit, for it contains a great number of ultimate functional divisions. Can it then be rightly held, that each of these divisions corresponds to an original embryological cell? No investigator who has studied the subject would venture such an assertion. In a paper contributed to Pflüger's *Archiv*, Bd. XXV., I have recently demonstrated the chemical continuity of the entire contents of muscular fibres. If a muscular fibre partakes at all of the cellular nature, it must form a single "cell," a single elementary organism. It cannot be composed of many autonomous vital units. But taking the muscular fibre, in spite of embryology, as a single elementary organism or "cell," how is it brought into vital communication with the nerve-cell, that immediately stimulates its function? Do we find here, at this most important station of cell-interaction, a separate nerve-cell, whose inward commotion is inciting as a stimulus to functional activity the *vis insita* of a separate contractile "cell". Here, if anywhere, at the

junction of the two most distinguished tissues of our body the tenets of the cell-theory ought to hold good. Unfortunately just the reverse is what actually occurs in nature. The researches of the most careful investigators show that the active substance of the nerve is continued without break into the active substance of the muscle. Muscle and nerve are thus found to form but one single physiological unit, a nerve-muscular element. And now let us gather under one view and follow up all the motor nerves thus structurally united with muscular fibres. We find them all converging towards one centre, where they originate in a common central substance. At least this is the just and proper inference from the most reliable observations; for no histologist has yet with certainty discovered any cell-connexion between the beginning of a motor nerve and the termination of a sensory nerve. On the contrary, anatomical as well as physiological facts tend to show that the initial motor network originates in the same continuous substance in which the ultimate sensory network is seen to lose itself. And then again, the sensory nerves, in their turn, are also found to be continuous with the active substance of the organs, by which the external stimuli are received.

Thus, structurally viewed, the complex and developed organism, instead of forming an aggregate of "cells," forms, on the contrary, an unbroken living substance, or single physiological unit, stretching a vast number of prolongations towards the surface, as relational elements for the reception of specific stimuli, and ending in a very complex apparatus for the execution of mechanical performances.

Driven from the anatomical and physiological position, the cell-theorist will reply: 'Embryology teaches us unmistakably that one original "cell" multiplies, and its derivatives continue multiplying till, at last, the entire "cell-aggregate" with its "coordinative machinery" is formed. This sufficiently proves that all living structures, of even the highest organism, must be composed of the progeny of the one initial biological unit, the impregnated ovum.' The fallacy of this view is easily exposed. If the ovum were indeed an initial elementary organism, the procreative multiplication of which gave rise, at last, to the complex organism, then the divers successive cell-generations could be conceived only as so many alternate generations; the central nerve-cells forming necessarily the culminating generation. In this case, the initial reproductive units of such a series of disparate generations could be derived only from the culminating generation, the central nerve-cells. As the actual state of things is most conspicuously at variance with this necessary conclusion, it is evident that the ovum cannot be conceived in the light of a parent-cell.

Mr. Darwin, aware of these difficulties, has sought to explain in a very different manner the all-comprehensiveness of the ovum or germ-cell. His reasoning, so far as it concerns the cell-theory, may be thus summed up: As the complex organism is an aggregate of autonomous units, therefore everyone of its units has to be separately represented within the ovum; the ovum of a complex organism must be a collection of germs or gemmules from all its vital units. In spite of Mr.

Darwin's great authority in matters biological, this "provisional hypothesis" of his has met with very little favour, even among the most zealous adherents and promoters of the new biology, of which he is the acknowledged and venerated founder. Yet, after mature consideration, biologists will have to acknowledge that, if the cell-theory is true, then Pangenesis affords the only possible hypothesis of organic reproduction. Cell-theorists are not exempt from the scientific obligation of having to adopt the conclusions that necessarily follow from their premisses. They offer a theory of organisation. Pangenesis is found to be the inevitable consequence therefrom. They will, therefore, have to put up with Pangenesis so long as they persist in seeing in the complex organism nothing but a cell-aggregate. No matter that Pangenesis is itself powerless to explain anything concerning vitality and organisation; nay, that it only introduces new difficulties. The ovum, instead of being itself an elementary organism, and unlike other germ-cells that are composed of similar reproductive units, is conceived as a congeries of an immense number of germs of disparate elementary organisms. The mystery of vital properties is left residing in the gemmules, wholly intact and unexplained. The sole *raison d'être* of Pangenesis is the representation of all vital units in the ovum as demanded by the cell-theory. If the collection of gemmules from all "cells" into a single receptacle could be reasonably attributed to the action of a force already otherwise known in nature, there would be some little foundation for the completely imaginative assumption of gemmules, as actual existents. But an entirely new force has to be specially invented for the occasion. It is obvious that a theory which necessitates such an unnatural and anti-scientific procedure must be made up of erroneous conceptions. Thus the cell-theory is found to be also embryologically untenable.

Cell-theorists, however, will not yet yield their position, even when deserted by embryology. They will fall back on comparative biology. They will assert that the study of lower forms of life proves that many individuals combine in a concerted action, dividing among them the physiological labour otherwise accomplished by a single individual. The actual, more or less complete coalescence of a number of individuals into a single body render this question extremely intricate. Yet it was just the study of lower organisms that led me to form a conception of organic individuality in thorough opposition to that assumed by the cell-theory. I found the organic individual to be an original unit gradually differentiated through relational specification. Thus the cutaneous layer of an organism is originally a continuous structure that gradually becomes differentiated into separate areas of specific stimulation. It is not composed of a number of separate individuals that have ranged themselves together in order to execute among them the divided physiological labour of the sensory surface. The contractile layer, in a similar way, has become by degrees divided and sub-divided into separate muscles and separate muscular fibres. It is surely not the single muscular fibres, as elementary organisms, that have become associated together in order to produce muscles,

groups of muscles, and at last the entire muscular system. I feel, indeed, almost ashamed of the overwhelming support that nature is giving me in this contest with the cell-theory. From all points of view it proves utterly incompetent to explain vital phenomena and organisation.

To bring the latter points in question visibly before the reader, I offer a test-object. In my contribution to the *St. Thomas's Hospital Reports* 1879, I have depicted two little worm-like creatures Figs. 10 and 12. They very much resemble each other in size and organisation. Fig. 10 represents a ciliated infusorium. Fig. 12 would be classed, I suppose, under the Turbellaria. On rupture, and consequent imbibition, the cutaneous layer of the turbellarian form breaks up into a vast number of "cells". The cutaneous layer of the infusorial form remains, on the contrary, continuous under all conditions, disclosing no "cells" whatever. Consequently cell-theorists have to maintain, and do maintain, that the former is a being composed of a multitude of elementary organisms, whilst the latter, otherwise equally complex and most alike in organisation, is pronounced a unicellular animalcule. It requires, indeed, all the courage of blind logic not to shrink from such an assertion.

If cell-theorists persist in flattering themselves with the adequacy of their doctrine, still continuing to ignore its flagrant inconsistencies and shortcomings, even after they have been again clearly pointed out to them, it cannot alter the fact, that they are lagging far behind in their understanding of life. Perhaps, however, they may think it now worth their while to attend to the difficulties here exposed. If so, I may entertain some hope, that they will come to learn from nature the lessons forced upon me by an unprejudiced yielding to her teachings. Then we shall be delivered from the ludicrous position of having, *secundum artem*, to consider ourselves a congregation of ever so many primitive lives, and shall feel scientifically restored to the full dignity of indivisible, autonomous personalities.

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OBSERVATIONS ON CASES OF COUCHING FOR CATARACT.

The death of Dr. Jencken (Dr. Franz's patient) some months ago, recorded by Mr. Mahaffy in a note copied from the *Athenæum* into MIND XXII., 298, may form a suitable text for a few remarks on this subject. It is much to be regretted that Mr. Mahaffy did not become acquainted with this gentleman (I never knew him) until his memory of the facts had become more or less indistinct, and that even then he did not take more pains to clear them up. For Dr. Franz's observations, though usually regarded as among the best which we possess on the subject, present features which are to me utterly

inexplicable—except on the supposition that Dr. Jencken possessed the sense of vision in a far greater degree than was supposed, before the operation. On opening his eye for the first time, he said he saw “an extensive field of light in which everything appeared dull, confused, and in motion”. An “extensive field” of light is rather a striking expression under such circumstances; but it is still more strange that the patient should have described the objects as “dull” if their colouring was really more vivid than he had ever seen before. Then, again, as to their “motion,” if he had never *seen* motion until then, the immediate identification of visual and muscular motion is one of the most startling facts in the case. When his eyes were next opened, he described what he saw as a number of “opaque watery spheres, which moved with the movements of the eye, but when the eye was at rest remained stationary and partially covered each other”: and on the third occasion he described these spheres as “less opaque and somewhat transparent” though more steady than before, and he was then for the first time able to “look through them” and to perceive a difference in the surrounding objects. In this description it is evident that if the patient used the terms in their ordinary signification, he perceived three dimensions of space from the first, since the very first things which he saw distinctly (whether the perception was real or illusory) were “spheres”. But, granting that sight might have given him the notion of opacity, what are we to say of the epithet “watery” which he, who had never seen water, applied to these first objects of distinct vision? Are we to suppose that the want of consistency which touch detects in fluids is a direct perception of vision, or that he had a notion of the visual appearance of water before the operation? Then what explanation are we to give of the apparent motions of these spheres—of their increasing transparency and steadiness and of the power which the patient acquired of seeing through them—every word of the description implying the perception of trinal space? All this took place before Dr. Franz instituted any of the experiments which he records, and no serious effort seems to have been made to ascertain what the patient really meant by these most remarkable expressions. Nor when the experiments were made, does Dr. Franz seem to have paid sufficient attention to them. Thus he tells us that though the patient “knew by his touch that the nose was prominent and the eyes sunk deeper in the head, he saw the human face only as a plane”: and yet we are informed immediately afterwards that though the human face pleased him generally, he thought “the nose disagreeable on account of its form and great prominence”. Probably these observations relate to different periods; but Dr. Franz states them as if they occurred at the same time. Mr. Mill has noticed the patient’s assertion that the solid figures shown to him “were not drawings”. A little cross-examination on this subject would have been useful. Other physicians, however, have been even more careless than Dr. Franz in making observations of the kind. Thus, according to Dr. Nunneley, his patient said that “everything touched

his eyes," and, he adds, "he walked carefully about with his hands held up before him, to prevent things hurting his eyes by touching them". A more absurd proceeding than the latter, if the objects *really* appeared to touch his eyes, it is scarce possible to conceive, especially if the hand appeared to touch the eye when in its normal position. But no effort seems to have been made to ascertain what the patient meant by saying that the objects "touched" his eye, though nothing is clearer than that he was not using that word in its ordinary signification.

A few remarks on the mode of conducting such observations for the future may not perhaps be out of place. Oculists are not, indeed, much to blame for the unsatisfactory results hitherto obtained, for until recently the main problem was supposed to be whether we originally perceive extension in two or in three dimensions by the sense of sight, and it was also taken for granted that we can attain the idea of extension by touch (or the muscular sensibility) without any aid from vision. But now the problem has assumed a different aspect. On the one hand, it is denied that unaided sight affords us any idea of extension whether in two or in three dimensions; and, on the other hand, it is contended that the idea of extension is so exclusively a product of vision that a man born blind has no true idea of extension at all. Now, if observations on couching are to be employed for the purpose of deciding between these theories, they must be conducted in a very different way from that hitherto adopted. First, more pains must be taken to ascertain exactly how much the patient was able to see before the operation and whether his previous idea of extension was exclusively, or mainly, a tactual and muscular one. A knowledge of visual figure and form does not at all imply a recognition of the particular figures and forms of outward objects. If we can see the figures and forms depicted on the retina, we may have a perfect idea of visual extension though no extra-organic object corresponds to our perceptions. Dr. Franz's patient believed that he saw external objects previous to the operation; and though the operator regarded this impression as a delusion, the failure of the patient to see more distant objects in the same direction may have been owing to the feebleness of the light reflected from them. Again, more attention should be paid to the earliest perceptions of the patient after the operation. At this period the eye is doubtless in too irritable a condition to be fixed steadily upon any external object; but if the question relates to the perception of extension and not to the recognition of particular figures, situations, and distances, this is really the stage which is all-important. The physician should in such cases not merely record the language of his patient, but endeavour to ascertain the meaning of it. In fact, if visual perception was really new to the patient, he could only describe it to others by its analogy to the perceptions of other senses which he had previously experienced. Cross-examination would probably bring to light whether his language was meant to be analogical, or whether the patient intended to assert a real identity between what was

now seen and what was formerly felt. Finally, when experiments on the perception of particular figures and forms come to be made, many cautions should be observed. First, the patient should get no hint that the visual form now before him was identical with any form which he had previously felt. If he was told, for instance, that one of the things before him was a circle and the other a square, he could hardly fail to notice four peculiarities in the one and an uniformity in the other, which would enable him to guess correctly. Secondly, before trying whether he recognised the identity of visual and tangible forms, care should be taken to secure the formation of *general* notions of visual form. Thus, if he had seen nothing but a blue triangle, his failure to identify its form with that of the tangible triangle would prove little, because the visual idea which he had formed might not be that of a triangle or even of a coloured triangle, but that of a blue triangle. Until he had seen several triangles differing in size, colour, position, and in the relative magnitude and inclination of their sides, we should have no reason to believe that he had formed the notion of what I may perhaps designate a visual triangle; and if he had not formed that notion—if the idea which he had derived from vision was less specific—his failure to identify the visual and tangible triangles could be accounted for on almost any theory. In fact, if triangles of different sizes and shapes were successively presented to an uneducated blind man, it is by no means improbable that he would fail to recognise the identity of their forms. The visual objects presented to the couched man should therefore receive names which were not associated with any ideas previously derived from touch or the muscular sensibility—suppose the letters of the Greek alphabet. By giving the same name—say Alpha—to blue, green, and red triangles, of all sizes and in different positions, we might insure the performance of most of the requisite abstractions; and when this had been done, the patient's reply to the question whether the Alphas were like anything which he had previously felt, would throw some light on the questions at issue. I think, however, the best course would be for the oculist to apply to a psychologist to assist him in making the observations. I was once applied to in this way; but the answers of the patient (before the operation) satisfied me that he possessed so much sight as to render subsequent observations of no use.

W. H. S. MONCK.

PROF. ROYCE ON "MIND-STUFF" AND REALITY.

I REGRET that ill-health will probably for a long while preclude my replying to the able articles of Mr. Gurney (MIND XXII.) and Prof. Royce (MIND XXIII.) on the variety of idealistic monism advocated by Taine, Clifford, Wundt, and myself. But I should be glad to have permission to offer a few remarks on some of the issues raised by the latter of these two papers.

In the first place I must plead guilty to unpardonable laxity of diction in having said, even conjecturally, that "motion *is* mind-stuff, that volume of feeling *is* mass, and intensity of feeling velocity". What I intended to convey was the conjecture that the phenomenon motion may be such a mathematical function of the noumenon mind-stuff that the quantity of motion is always directly proportional to the quantity of underlying mind-stuff. I think, however, that Prof. Royce is too hard on me when he says that "there is something fundamentally unintelligible" in my assertion. For although in the other parts of my essay I had made the terms of mechanical science—matter, motion—to signify respectively permanent possibilities of sensation (in the sense of Mill) and changes in those permanent possibilities, in fact, to signify phenomena, and although I ought therefore to have adhered to this nomenclature throughout, yet I might, without greatly straining language, and certainly with good precedents, have made these mechanical terms to signify instead the hypothetical noumena which underlie the possibilities of sensation and the changes therein. Adopting this latter nomenclature, it may be true or it may be untrue to say that motion *is* mind-stuff, but it is obviously no longer nonsense. My object in saying "motion *is* mind-stuff" was to avoid an awkward periphrasis. However, I do not seek to excuse, but only to explain. Taking into consideration the context, I hoped I should not be misunderstood. I am accordingly glad to find that although Prof. Royce pronounces my assertion "fundamentally unintelligible," he has himself supplied the explanation with admirable lucidity and terseness on page 374. Barring the allusion to a pre-established harmony, I could not wish for a more precise statement of my fundamental position than that which the Professor supplies in the following words:—"Suppose, then, that the world consists of fragments of mind-stuff whereof each one is endowed with a capacity for the change, within certain limits, of its own intensity and quality. Suppose, also, that by some pre-established harmony (other source is hardly well conceivable) the alterations in one atom are uniformly connected with alterations in other mind-atoms, according to fixed laws. Then, indeed, the world of mechanism, of dead matter and motion, could be in a manner conceived. That is, one could understand how to each simple phenomenal mechanical effect, *e.g.*, a blow or a push, there corresponded some noumenal alteration in the mind-stuff atoms. Even the law of the conservation of energy would be capable of expression in terms of such assumed elements. Since velocity and mass would be interpreted in terms of ultimate alterations or permanences in the mind-atoms, all laws about velocity and mass could be expressed in the same terms." Prof. Royce is quite right in thinking that the doctrine of mind-stuff requires us to think of the noumenal world, not as consisting of unchanging atoms, but as a thorough-going flux after the fashion of Heraclitus.

By an easy transition I can now define my attitude towards Prof. Royce's statements that according to the mind-stuff doctrine "space-relations" must be "unreal and illusive" (p. 371), and that "at least

some mind-stuff is non-spatial" (*Ibid.*), and towards his question, "What meaning would there be in Euclid's axioms if the world were composed wholly of elementary sensations not grouped into conscious minds?" (*Ibid.*) Let us suppose a pair of mind-stuff fragments (I will not call them atoms, because I think we cannot legitimately form an opinion as to whether the Universe is a continuous or a discrete aggregate) A and B, and another pair C, D, such that A has exactly the same volume or massiveness, intensity, and quality as C; and B has exactly the same volume, intensity, and quality as D—such, in fact, that A, C are exact counterparts of each other, and that B, D are exact counterparts. Then, I conceive that the facts of causation in the Universe are such that A, B do not necessarily or usually influence each other (*i.e.*, produce changes in each other) in the same degree as C, D. These inequalities of mutual influence or causation give rise to the fact of Space in the following way. If A, B influence each other more than C, D, then the two phenomena corresponding to A, B (let us call them a, b : they may be quanta of motion, of matter, of force, of kinetic energy, or of some more complex function of mass and velocity¹) are nearer to each other in space than the two phenomena (call them c, d), corresponding to C, D. If A, B do not influence each other at all, then a, b belong to entirely different phenomenal worlds. They are not contained in the same space. Thus distance-relations in the phenomenal world appear to me to arise from irregularities of causation in the noumenal world. Since the time of Lobatchewsky it has been well known among mathematicians that more than one scheme of distance-relations is logically possible: since the time of Riemann, that all sorts of schemes are possible—that Euclid's Space, in which we fancy (perhaps correctly) that our phenomenal world is situated, is only one among hosts of logically possible spaces. Which kind of space, *i.e.*, which kind of geometry, actually obtains in our phenomenal world, must depend, on my view, on the particular kind of irregularity which prevails in the facts of causation of the noumenal world. All we know is that our Space does not differ perceptibly from Euclid's ideal Space, *i.e.*, from a flat, homogeneous, monodromic, continuous manifold of three dimensions. The view here advocated falls, I believe, under that division of views on Space which Helmholtz characterises as "aprioristic". It does not affirm that the space-nexus is itself a fact of the noumenal world, but it affirms, with Herbert Spencer (*Principles of Psychology*, I., 227), that "there is some ontological order whence arises the phenomenal order we know as Space". In this sense, then, I agree with Prof. Royce when he says that the great bulk of mind-stuff must be non-spatial. With respect to Time I conceive the case to be entirely different. I agree with Prof. Royce that "ultimate mind-elements, conceived after the

¹ I have conjectured, in my paper (MIND XXI.), that they are quanta of motion, but it seems to me quite premature to form a positive opinion. Physiological psychology is the only science that can throw light on the question.

analogy of our simplest sensations, *have a time-element*," and I thank him for thus insisting on the salutary but oft-forgotten truth that Time is a deeper fact in nature than Space. It is too much the fashion to speak of them as if they were about on a level. The phenomenal world and the noumenal world (at least as much of the latter as we can legitimately infer the existence of) both exist in Time, but only the phenomenal world exists in Space.

I do not propose here to enter on Prof. Royce's remaining difficulty, *viz.*, that of explaining consciousness as a mere aggregate of elements separately unconscious, further than to remark that I think a thorough-going nominalism helps us wonderfully here, and that I cannot conceive how Prof. Royce can explain the growth of psychical life in the embryo, the foetus, and the infant, on any other view. To do so must surely, unless we admit metempsychosis, involve at any rate the sudden creation of a "unity" or "entity" or whatever mysterious thing Prof. Royce conceives the ego to be apart from its constituent elements.

There are undoubtedly great difficulties in the way of conceiving conscious life as merely a stream of feelings—a "rope of sand," as Mr. Gurney calls it—but even if they should prove insuperable, they could at most be fatal to the doctrine of mind-stuff in its narrowest form. They could not affect what I personally am far more concerned in maintaining, namely that general doctrine of idealistic monism, which embraces Berkeley and Schopenhauer as well as Taine and Clifford, and which is equally opposed to dualism, to crude materialism, and to that strange monism, more than once referred to by Prof. Royce, which, while regarding the physical and mental as two faces of the same event, appears to regard both as equally real, equally ultimate, or both as equally apparent, equally derivative. We could still say with M. Taine that, in this dualism of the physical and the mental, "all the advantage lies with the mental event". If we were to adopt Mr. Spencer's metaphor and call matter and mind the *x*'s and *y*'s of our equations (*Principles of Psychology*, I., 627), we could still maintain that mind alone is the *independent* variable.

In conclusion, I would express my regret that M. Taine's early enunciation (in 1870, *De l'Intelligence*, I., iv. 2) of the mind-stuff doctrine appears to be so little known, also my great personal obligations to Mr. Herbert Spencer for the luminous suggestion on page 161 of the *Principles of Psychology*, Vol. I. How thoroughly M. Taine's doctrine coincided with that which has since been enunciated by Prof. Clifford and myself will be apparent from the following passage—perhaps even yet the best summary of it:—

"Suppose a book written in an original tongue and furnished with an interlinear translation; the book is nature, the original language is the mental event, the interlinear translation is the physical event, and the order of the chapters is the order of beings. At the beginning of the book, the translation is printed in clear and legible characters. But these become less so, as we go on, and here and there, from chapter to chapter, new characters creep in, which we have difficulty in connecting with the earlier

ones. At last, and above all in the final chapter, the impression can no longer be deciphered ; but we have abundance of evidence that it is still the same book and the same language. It is just the reverse with the original text. It is very legible at the last chapter ; in the one before it the ink is pale ; in the earlier chapters we can still discover that there is printing, but can read nothing of it ; before that again, all trace of ink has disappeared."

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VI.—CRITICAL NOTICES.

The Metaphysics of the School. By THOMAS HARPER, S.J. Vols. I. and II. London: Macmillan, 1879, 1881. Pp. lxxx., 592 ; xxvii., 757.

I.

In these two volumes Father Harper has given the first instalment of an attempt to resuscitate medieval ontology, and bring it into line with modern science, and to represent these as in harmony and mutually supporting and illustrative, to the exclusion of more modern philosophy. The metaphysic of the School and modern science (when modest and on its good behaviour) together furnish a sufficient rationale of the universe, and when Father Harper has completed his peace-making exposition, will have put all other philosophies from the Cartesian downwards out of court. So far as these two volumes go, it might perhaps be said that Father Harper has succeeded after a fashion. But it is very indifferently well, and the science will be found to be put on the "entities" like paint or artificial flowers. The sequel of this Notice, it is hoped, will go some way to justify these remarks. Yet taking the book simply as an exposition of St. Thomas and his orthodox following, and leaving out of count the apologetic, controversial and syncretic parts, it is careful, accurate, lucid, and full—almost overfull, and may be regarded as a valuable contribution to the history of philosophy. Certainly, after reading it, one finds other recent accounts of the metaphysic of the School, such as Cousin's, Jourdain's, and Hauréau's, meagre and uninforming. The only work that may claim to equal it in merit of exhaustiveness is Kleutgen's *Philosophie der Vorzeit*, which is not accessible to English readers. F. Harper's work must therefore be welcomed as a decided acquisition, and stands almost, if not quite, unique among English books.

Encouraged by finding that "not a few men of information and study in English-speaking countries, even among such as have devoted themselves to physical pursuits, who, tired with the ever-rising Babel of new philosophies and with the universal disintegration of scientific

thought that has resulted from what has been called the *critical* method, are looking back with a wistful glance towards the old philosophy, but are puzzled where to look for it," he offers "a course of scholastic philosophy suited to the needs of this 19th century and to the apprehension of men of culture". He would rehabilitate Reason which has been confounded and disintegrated by Descartes and the brood of scepticisms and idealisms that have proceeded from him.

He tells us he eschews "ideological" questions, and so has little to say about Nominalism and Realism, except by the way. Yet he says a good deal for Realism, and assumes more.

In the volumes published, he has treated of "the Definition of Metaphysic," "Being," "the Transcendental Attributes of Being," "the Principles of Being," and the first two of "the Causes of Being"—namely, Material and Formal Cause. Efficient and Final Cause, "the Primary Determinations of Being," the Categories of Aristotle, and Natural Theology are to come.

In all this he professes to follow Aquinas strictly; and, while mainly adapting Suarez's order of exposition, he holds to the master and revindicates his doctrine, wherever Suarez deviates in details. The exposition claims to be "elementary and popular," but is really as tough and abstruse and minute a bit of reading as one could find in a long day's walk round a library. While this is said to mark F. Harper's failure to fulfil his promise of "popular" style and treatment, it is meant in no disparagement. The result could scarcely be otherwise, where a man fully equipped for his task, earnest and conscientious, has applied himself to interpret Aquinas, the voluminous doctor.

F. Harper at great length defends the technical language of the School against the charge of barbarism, on the plea of necessity and relevance. But in these days such a charge is not likely to be seriously preferred by any who do more than play with science or philosophy, and might have been dealt with more lightly. Yet this is only the earliest indication of what proves to be a marked characteristic of F. Harper's treatment of his subject throughout, namely, diffuseness, reiteration, and almost painful elaboration of details. The multiplication of illustrations sometimes almost blinds us with excess of light. The multitudinous links and turns and windings of his chains of proof upon proof sometimes threaten to strangle comprehension and consent. Distinction within distinction, from subtlety to supersubtlety, often leaves little or no impression on the mind but such bewildered admiration as one accords to the ingenious artificer of a Chinese-puzzle or the writer of "The Lord's Prayer" within the circle of a three-penny-piece. And while F. Harper has made good in elaborate form his title to use technical terms, this will hardly cover from blame many frequently recurring words and phrases, such as "inamissible," "decretorial," "sensile," "absonous," "fautors," "ubication," &c., which give a somewhat quaint archaic and unenglish appearance to his pages. But this was perhaps the natural and unavoidable result of his special discipline and erudition.

In the first chapter there is an exhibition of the nobility and pre-eminence of Metaphysic, "Queen of Sciences," which reads like the unfolding of a pedigree by a king-at-arms; and then we are told that it is "the science of real being as such," and further that it considers "quiddities" and "essences," and does not deal with concrete existents; that it primarily investigates "the Transcendentals," namely, Being, and its three attributes, Unity, Truth, and Goodness, all which permeate and go beyond the categories; while it specially contemplates "the nature and properties of pure forms," *i.e.*, "spiritual substances," "for though," as Aquinas says, "it is the office of a Metaphysician to treat of all realities, in so far as they are included in the notion of Being, yet it behoves him specially to treat of separated and spiritual entities, because in them is preserved with greater perfectness the idea of Being," "as also because their special and particular nature is hidden from us"—whence the doctrine of souls and angels. Again, "it principally treats of Him who is infinite being, infinite spirit, First Cause". So we may look for a great deal of theosophy in what follows, and accordingly I wish it to be understood that, whenever I have occasion to handle freely the God of the School, I take it that I am not dealing with the infinite object of religion or its confessedly provisional ideals, but with the pseudo-scientific concept of theology, which I find put forward and used as definite and final.

Here, then, at the very outset, we have "being-as-such," "essences," "quiddities," "pure forms" (which yet are "spiritual substances"), "realities," "spiritual entities," "God," &c., filling up the firmament of thought. And, so far as yet appears, they are brought in and set in view just as if they were objects of direct perception, each separate and complete in itself, and capable of standing alone. "Real Being" at least is taken to be so familiar and well-known an object, as to make us feel it to be almost impertinent to ask what it means for the Angelic Doctor and his interpreter. Nevertheless, we must put the question, and their answer will determine our agreement or disagreement with the School notion of a metaphysic.

It helps us, to what their meaning is *not*, to find that "logical beings" such as "second intentions" or forms and laws of thought, and "collective, negative, and privative concepts," are not "real beings"; and the two kinds cannot be subsumed under any higher category. "There is nothing which can be univocally predicated of both." Therefore, reality of being is something other than and independent of presence in consciousness, for that can be univocally predicated of both. Here it begins to dawn on us that the metaphysic of the School is a kind of absolutist ontology, and deals with things-in-themselves, and not as phenomena of consciousness, which, in some way not as yet made known, it gets at and presents to us.

Here then the paths divide, and here at the watershed is, as I think, the fountain-head of all the errors of the School. They take up "being-as-such" and "essences," as objects given ready-made and obviously known. They posit as separate from consciousness and

independent of it, a world of "singular and individual" existents, souls, bodies, &c., without asking themselves what they mean by so doing; and without preliminary search, by way of reflective analytic like Kant's or Renouvier's or Hodgson's, for the manner and process of the arising of such a world in consciousness, and the secret of its apparent or real detachment. Hence it is in vain that they claim for their metaphysic, as F. Harper does, the prerogative of "architectonic" to the special sciences. It cannot be the universal condition of the sciences; but it may itself be a science, if it can make good the only position that it is competent for it to take up,—that of some kind of organised direct perception. And to do so, it must fall back on its lines of communication, so to speak, on its peculiar psychology, and defend against all comers its intuitive faculty of understanding, which is the sixth sense of the schoolmen, and gives them the objects of their special science, *viz.*, "essences" as objects of direct and immediate intuition.

To show that I am not misconstruing F. Harper, I shall quote one crucial passage that appears to me to settle the matter definitively: "Real Being may be described, then, as a being which either exists or may exist outside of, or beyond, the objective concept of the intellect." Now, by "objective concept," he means that "reality in the object which is covered by our present thoughts." "Thus, an anatomist when he looks at an animal thinks only of its bodily structure. This reality, therefore, in the animal will be his objective concept." But this reality in the animal is not real being, which, as we have just been told, either exists or may exist outside of, or beyond it. Real being, in fact, is something more real than this reality, or any other such. It may or does exist apart from the objective concept or consciousness—*i.e.*, as other than object of any thought or knowledge. It is *Ding-an-sich*, but yet somehow the intuitive understanding gets a hold of it for us without destroying its unphenomenal irrelativity!

F. Harper proceeds next to teach us how to know "being-as-such" from "existence". "As a fact, the reality which is covered by the formal concept of essence is, in and by itself, really distinct from that other reality which is covered by the formal concept of existence." Observe the in-and-by-itselfness, and also that it is the realities themselves, and not merely the concepts of them that are "*really* distinct". In other words, because we can conceptually distinguish in reflection between the statement, *that* a thing is, and the statement of *what* a thing is, we are entitled to conclude that existence and essence or nature are *absolute* realities—each *totum teres atque rotundum*, and indifferent to its relation to any conceiving mind.

F. Harper does appear to waver sometimes in his absolutism, and to give a faint promise of the other view, which I hold to be the correct one, that neither "reality," "being," "essence," "existence," nor any thing whatever has name or meaning, but as presentment or object of consciousness; yet, on the whole, he keeps consistent with himself and his master, St. Thomas. Thus, on p. 48, Balmez is censured for maintaining that "pure being, in all its abstractness, is inconceivable

without actual being ; it is existence itself". "If this be true," says F. Harper, "if the most abstract idea of being necessarily include *actual* existence, and is identical with it ; then, there is no room for the doctrine of possibility, and the Universe is God."

The object of the inquiry which leads up to "the doctrine of possibility," is "to discover what a merely possible essence is, ontologically and independently of the mode of conceiving it". To the idea of possibility, "there must be a corresponding reality in the order of things". So "possible being," too, is dealt with from the dualistic stand-point. Besides possibility implies "power or faculty". Now, I take it that possibility is not a category of reality, but represents our individual and subjective ignorance and uncertainty about things and events, that are both actual and necessary. In respect of events, it is forward-looking, and represents our ignorance of a future which has no sooner come than we see it to have been necessary and, therefore, actual. If its cause or the sum of its conditions is present and actual, then the thing that may be, is and cannot but be. If not, it may not and cannot be, and falls under the category of the impossible, which is a real category. If a thing is thought of as possible, then the sum of its conditions is thought of as filled up, and the thing cannot then be thought of but as perceived or existent—and as *necessary* existence.

Prop. 8 : "The concept of merely possible being, so far as it is possible and real, is the concept of some being or other not possible but existing." Here the School would appear to say the same thing ; only it must be remembered that with them existence is always something other than perceivedness. But in this latter phenomenal sense, the proposition appears true. And it might be applied in criticism of Mill's "permanent possibilities of sensation," when it will be seen that they must be thought of as actualities, that is to say, as felt or perceived, though not felt or perceived here and now by the *individual* thinking. But with the School the concept of possible being is not thus resolved into the concept of the existence of the *same* being, but into "the concept of *some* being or *other*," that "in some sort precontains it," and in which it preexists "virtually, eminently or ideally". "So, the soul of man can vivify and develop the body which it informs ; because vegetable and animal life, ... are eminently contained in the spiritual substance of the soul". But further, Prop. 10 teaches that a possible being or essence to be possible must be "logically contained" in some existent, *i.e.*, must be the representation of a mind, "for no efficient cause is perfectly prepared and ready for the production of its effect, unless it either knows itself what it is going to do, or at least is under the direction of some superior cause which possesses the necessary knowledge." The anthropomorphism is sufficiently naïve here. For the possibility of sausages, a sausage-machine is not enough unless it is conscious, for, if it is not, a sausage-maker must be added to ideally precontain them. The way we are now going is inevitable, once we have admitted that possibility is an ultimate and adequate category of reality, and not merely a subjective and provisional way of regarding and classing.

from an abstract and individualistic point of view. Once committed to this pathway of the School, Prop. 14 is irresistible. "Beings are internally possible, forasmuch as they are contained logically and eminently in God; externally possible, forasmuch as they are contained potentially in Him." "The Infinite Mind, contemplating from all eternity his own infinitely perfect Essence, conceives it as partially imitable in infinite degrees of order and excellence outside himself, should he so will it." Here are at least four unanalysed assumptions—an infinite mind, an infinite essence, an infinite "freewill," and an infinite possibility of outsideness; and all four taken and treated—*more scholastico*—as separate entities. This deduction or postulation of a supreme artificer or artist was made necessary by mistaking possibility for something more than a negative logical subjective concept.

And yet in the end F. Harper is led to admit that "albeit possibles are possibles *formally*: yet possibles are not possibles fundamentally and in their Exemplar"—thus *virtually* upsetting the main premiss of his whole argument for "possible being". And the inconsistency does not take us by surprise, when he says in another part of his book, that "merely possible essence is distinguished from its after existence as not-being from being; and the distinction may be expressed by the formula, *Thing is really distinct from no thing*".

Next comes "existing being". Existence is "essence, quiddity, or nature as specifically determined to actual existence *hic et nunc*". "It stands for a being that really exists outside its proper causes." Is this not palpable tautology, and equal to Existence is existence? If not, it is saved from this predicament, as elsewhere F. Harper tries to save it, by borrowing the idea of God, ready-made and fully-furnished, from the creed of the Church, and thereupon placing the actuality of essences as distinct from existents, in His mind. Essences or pure forms actually are in Him as his thoughts, and so they are *within* their "proper cause". Existents are the same beings outside their proper cause. But it is plainly suicidal for what calls itself a metaphysic, and claims to be architectonic and regent of science, to serve, and lean on, any ecclesiastical dogmatic system in this fashion. If it must have its presuppositions, at all events let it not assume them from a source extrinsic and alien to Reason.

Let us try another of F. Harper's definitions of "existence". "The word is abstract and representative of a certain quiddity, by virtue of which things are truly said to exist." But surely this confounds thatness with whatness; and besides gives us two existences—(1) existence (2) existence by virtue of which existence exists—for solution returning us the difficulty doubled. On the same page, there is a second definition. "Existence is the actuality of being." This again appears like saying the same thing twice over, if not thrice. However, the author evidently means that essence as possible, being made actual by efficient cause, *i.e.*, the freewill of God, is existence. But this will not help one who has displaced "possible being" from being, and is not prepared to take efficient cause and divine freewill for granted. Besides, "cause" and "will" must be

conceived as existing, and how then can we take one or two existents to explain existence?

The last four hundred pages of Vol. I. are occupied with a very minute and detailed consideration of what are called "the three primary attributes of being in general". These are Unity, Truth, and Goodness. They are transcendental "determinations of being by explicit evolution of entity". It is to be specially noted that they are not characters of things as felt, known, or thought, but of being-as-such, *i.e.*, of things-in-themselves; else they could have no place in the metaphysic of the School. Transcendental Unity, for instance, is not numerical or quantitative unity. It is not relative to mind attending and counting. Truth is not the more or less approximately permanent consistency of knowledge or thought with itself. Goodness is not phenomenal and relative—the objective aspect of desire, conceived abstractly. But all three transcendentials are absolute characters of absolute being.

Unity is transcendental "indivision," and "the division between Being and its negation is sufficient for the genesis of the essential idea of unity, without any intervention of plurality". Just as if being and non-being were not formally "a many," namely, two ones, in as much as I must have twice attended. There is a very tempting pseudo-Hegelian air about St. Thomas's production of "one" by means of "naught," and deduction of "other" from "one," and "many" from "one" and "other"; but it is really genius misapplied.

Under the head of unity there falls to be treated the famous "principle of individuation". "Haeceity" is not a name for the mind's act of attending, abstracting, and conceiving—for a relative and provisional act of unification taken statically and objectively; but it is "the thisness of a thing, that something which constitutes an entity to be individually itself" and one. In fact, it is another thing-in-itself, absolute and irrelative to mind—again the original sin of the School in one of its endless transgressions. One result is, that the Scholastic "individual" is rigid and refuses to change or move, for "if matter quantitatively determined" (by mind) "were the intrinsic constitutive principle of individual unity, it would follow that the same material substance would be all but ceaselessly receiving new individuation, and become a nucleus of individuals indefinitely numerous". But is not this just what happens? Πάντα ῥεῖ. There is an ever-changing perceptual continuum, before it is broken up conceptually and provisionally into a many of ones. Haeceity is further explained in Prop. 46: "Every material substance, whether complete or incomplete, is the intrinsic constitutive principle of its individuation by its own actual and proper entity." In other words, every individual is individuated by its own individuality. This is not very satisfying, especially as we are hurried on to receive our first introduction to matter-*per-se* or "primordial matter," as one of these self-individuated individuals, and have the question put to us: "Who, save one who holds that material substance is itself a mere congeries of sensible accidents, could be found willing to maintain that, if the body of a living man were stripped of its quantity and other accidents,

the substantial matter would have no Haeceity or individuation, apart from that of the informing soul? And such an one, if he should chance to exist, will find no place for himself or his opinions in this work." I am sorry to have to confess that this is my plight—or worse, for I am not even acquainted with "the informing soul". "Modes" form another class of self-constituted individuals. "For instance, the union of my soul to my body is a real individual entity, distinct from my body and distinct from my soul". When asked to face this new phase or Haeceity, one is driven still further out of court, unless one chances to have about one "the particular reason, a special faculty by which man is enabled to apprehend individual material natures," *i.e.*, haeceities. If not, there is nothing for it but to be content with sensible matter, a mere empty and superficial bundle of accidents, quantities, and qualities—"the effect of the Haeceity, not its cause". "It is the province of the Intellect alone to contemplate Natures and Essences." Angels are another kind of self-individuated haeceities, and every angel is privileged to be himself a species! F. Harper proves it. "Accidents" again "are individual by their own actual entity," and each "has a distinct entity of its own"; so that, *e.g.*, "the quantity in a geranium, and the qualities of red, green, and the like are real entities, entirely distinct from the substantial entity of the plant". Once more we have the old fallacy of confounding elements only distinguishable in subjective analysis, with separate component parts in direct perception, and of taking conceptual abstracts for perceptual or intuitional concretes. It follows as a matter of course that "God *de potentiâ absolutâ* could create (or uphold) the accident without its subject". "Density," for instance, says St. Thomas. And, indeed, He does so in transubstantiation. After a vain effort to understand these matters that are too high for us, it is some comfort to find St. Thomas and F. Harper deciding that God could not cause whiteness to exist unextended, though Suarez and others of the School are disposed to think otherwise. Under cover of the Master's last *dictum*, we take leave of Haeceity.

The next subject taken up is "Formal and Universal Unity". When St. Thomas says, "There is nothing really common to many; for what really exists is a singular communicable to one alone. But that which is common is a creation of the intellect,"—he appears to be a conceptualist or nominalist, and of the ordinary modern way of thinking about generals and universals. But here a distinction must be made. He does not get them in the ordinary way—by abstraction and generalisation from sensible things or percepts. From sense generalised no *true* universals can come, but only collective concepts of accidents. "Intellect" penetrates to substance, "intues material things immaterially," discerns the essence or quiddity and "the unity of the essence"; and that is "a potential universal". The "intellect" then abstracts it, takes it out of its accidental setting, and applies it indefinitely, and it so becomes a proper full-fledged "universal," in itself as such only *ens rationis*, but in its ground, an absolute entity. It easily follows that there can be a universal by intuition without

either precedent or subsequent generalisation; and "the existing similarity of entities to each other, even in their essential notes, is not necessary to the constitution of a universal".

A hundred pages are devoted to Truth. About "conceptual truth" there is nothing said that differs much from current views. Consensus appears to be the criterion of Truth in this sense, for Aquinas, commenting on Aristotle's dictum, "Ὁ γὰρ πᾶσι δοκεῖ, τοῦτ' εἶναι φάμεν," says, "It is held as a sort of principle, for it is not possible that the natural judgment should err in all men".

But such sublunary truth has nothing to do with being-as-such and metaphysics. Transcendental Truth, Truth of Being, is "the Being itself as naturally fitted to cause in whatsoever intellect a true estimate of itself". It is the being as *cause* of assimilation and conformity to itself—as having *power* to make itself intelligible and certainly known. In short, object is taken, as usual, as *separate* from subject, the known from knowledge, and then a *power* has to be assumed in the object to bring them together into one. The assumption ceases to be necessary, and Transcendental Truth to have any meaning, when we take them as we find them in reflection, and deal with them as inseparable though contra-distinguished aspects or sides. Even St. Thomas and F. Harper seem to waver and be disposed to take a phenomenal view, when they call a judgment "a real entity"; and a sense-percept "a real being"; unless their use of the words "entity" and "being" indicate a clinging to the separatist view. Yet carried out strictly to its issues, their admission would lead them to give up things-in-themselves, and "the science of being-as-such".

But if they do hold on to them, it must be said in their praise that they nobly contend for the perfect conformity of being and thought or knowledge, and generously furnish us with a faculty for reaching their substances, substrates, essences, &c. Prop. 87 affirms that "there can be ontological falsity, properly so called, neither in respect of the divine, nor of the finite, (either speculative or practical) intellect". In other words, their faith, unlike the despair of some modern absolutists, is, that, while the unknown will always extend infinitely beyond the known, still there is and can be no impassable barrier to knowledge, and no ultimate unintelligibility and unknowableness. They do not dogmatically rob mind and science of their endless career. This faith and hope is worthy of all praise, and most opportune. But it can only find its justification in a thorough-going phenomenalism.

The last proposition on Truth is a curious one. "Falsity in the judicial act itself is justly attributed to the will." All false judgments are wilful! Erroneous opinions are therefore more or less blameworthy, and perhaps they ought to be punished? Intellectual error is of the nature of sin and crime. So the Church philosophy has supported the Church executive in the middle ages, and since.

Transcendental Goodness is explained in this way:—Every being, in so far as it has being, has perfection; and this perfection which is one with being, and which causes itself to be desired, and becomes a final cause, and "spreads, communicates, and diffuses itself," is transcen-

dental goodness. Prop. 100: "Every being as such is good". The proof is poetical: "for those things which as yet have no share in Being, tend towards Being by a sort of natural Desire;—while those things which have Being already, naturally love that Being of theirs, and preserve it with all their might:—therefore, Being itself has the nature of Goodness". There follow two disquisitions on whether "mathematical entities" and "primordial matter" are good in themselves. The latter is good, and its "form," too, because it naturally desires its form, and its form naturally desires it. As creative of desire in each other, these two beings are good. And if this appears too dramatic a reason, there are, as usual, half-a-dozen others in reserve.

Then as Being is Goodness, and Goodness is Being, Evil is nought. But not every non-being, "negation or limitation," is evil; only "privation of *due* perfection". Here the idea of ought-to-be is allowed to slip into the argument, ready-made and unaccounted for. Moral evil, for instance, is privative of a *due* and higher good. As an act of will, sin is positive; but as sin or evil, it is privative, and merely the non-being of that which ought to be. Again, suffering is positive, but is not Evil. Grief and pain are occasioned by evils, but are themselves positively good, for they are in themselves emotions or feelings which are excellences or perfections of our nature, and in their effects they are good and salutary. Thus defended from objections, and established, the non-being of evil forms the basis of a Theodicy. And what contributes very materially to the superstructure is "this *revealed* truth," that there is no natural or physical evil in the lot of man, for "it is held, according to the tradition of the Faith, that a rational creature could not have incurred any harm either in soul or body or in any things external, save for some previous sin, personal or original". Freewill has wrought all the mischief. But I cannot see how evil-as-such, *i.e.*, as non-being, can have that or any other "efficient cause"; nor, inasmuch as nothing can neither aim nor be aimed at, how evil can be either "efficient" or "final cause," means or end, of aught.

With "Transcendental Goodness" the examination of Vol. I. ends. It has brought out, amongst other things, that the School makes a beginning and effects an illusory appearance of progression by taking abstract products of mental analysis and distinction for separate and independent concrete objects; objectifies individualist and provisional points of view, as in the case of "possible being," and then treats them as "entities"; feigns a faculty for discerning those various things-in-themselves, called "the intuitive understanding"; and does not think freely and without prejudice, but moves warily within the rigid limits of a body of foregone conclusions, the Church creed, from which it never scruples to borrow, when distressed for want of a principle of explanation, and to which it is always subservient. Scholasticism is, in fact, the outcome of an impracticable attempt to serve two masters, Reason and a preternatural revelation. With one eye always on the infallible creed, it suffers constantly from obliquity

of vision. This will come out into even clearer light, in the critical notice of Vol. II., which is to follow. In it, F. Harper brings the metaphysic of the School into more direct contact with modern science and its philosophical implications. It remains to be seen whether the contact results in collision or coalescence.

J. BURNS-GIBSON.

History of Materialism and Criticism of its Present Importance. By FRIEDRICH ALBERT LANGE, late Professor of Philosophy in the Universities of Zürich and Marburg. Authorised Translation by ERNEST CHESTER THOMAS, late Scholar of Trinity College, Oxford. In Three Volumes. Vol. III. London: Trübner, 1881. Pp. 376.

The first edition of the *Geschichte des Materialismus* appeared in 1865, the two volumes of the second and enlarged edition in 1873 and 1875. The English Translation in three volumes, the first of which appeared in 1877, has now been completed. The time that separates us from the first appearance of the work is thus not long; but perhaps it is long enough to enable us to approach it with some hope of forming a dispassionate judgment of the place it is likely to hold in philosophical literature. The estimates that have been formed of it both in Germany and in England are so various that the critical evaluation becomes a matter of considerable interest. In Germany the influence of the *History of Materialism* upon the younger philosophic generation, and still more upon the floating mass of semi-philosophic, semi-scientific speculation certainly exceeded for a decade that exerted by any other recent work, if we except the temporary *furor* excited by Von Hartmann's *Philosophie des Unbewussten*. Perhaps it is not too much to say that Lange's work constitutes the chief stock-in-trade of a good many of the philosophical *Docenten* and Extraordinary Professors. One of the acutest of these, Dr. Hans Vaihinger, insists that Lange must be ranked as one of the chief philosophic figures in the second half of this century. He accepts Lange as his master, and sees in his reading of Kant "a definitely conclusive critique" of the philosophic endeavours of the past and the present. In this country general attention was called to the *History of Materialism* by the high eulogies of Prof. Huxley and Prof. Tyn-dall—eulogies which embraced not only the historical exposition, but the substantive doctrine which the work was meant to enforce. As an offset to these estimates it is only necessary to refer to the extremely disparaging judgment of Prof. Flint in his *Anti-Theistic Theories*, endorsed by Prof. Adamson in his elaborate criticism of the standpoint in his *Philosophy of Kant*.

The variety of estimate is due to the fact that the *History of Materialism* is more than a History in the ordinary sense of the term. It aims, as already hinted, at enforcing a doctrine. The whole development of Materialism, and, indeed, of science and philosophy—for Lange by no means confines his attention to Materialism proper—

is meant to lead the reader to the position which was, for the author, the last result of philosophic wisdom. In this sense the book is undoubtedly what Von Hartmann called it—a *Tendenzschrift*, and Lange himself never denied the fact. His first object, he says, was to exercise an immediate influence; and in spite of the wider scope of the purely historical element in the Second Edition, “the essential purpose of the book,” he maintains, “still lies in the attempt to clear up principles”. Lange does not claim for his work the character of a formal historical monograph; it is intended, in the first instance, to teach and enlighten. So much is contained in the title, which describes the book as a “History of Materialism and Criticism of its Present Importance.” The first half of the work points throughout, according to the author’s conception, to the philosophical deductions of the second. Here he gathers together the main results of science within recent times; connecting the achievements of research in different spheres, he points out their significance as modifying our total conception of the world. He subjects to a searching criticism the theories that scientists have based upon their discoveries, and then proceeds to draw the total picture of the world as science now reveals it, or tends more and more to show it to be. Finally he indicates the relation of this conception to Materialism and his own philosophic deduction from the whole course of the investigation. Such a program carried out by a man of clear, quick intellect, versed in science, and gifted, besides, with a keen philosophic interest and very considerable philosophic grasp, could not fail to attract intelligent attention everywhere, especially on the part of philosophers and scientists who felt their own culture to be one-sided. The easy intelligibility and bright popular style of the historical parts attracted many readers, but the chief interest lay in the lesson or moral of the book—in the philosophic position of the author. It is this, of course, that is in question when his ‘influence’ is spoken of. Vaihinger calls the position Criticism, that is, Kantianism pure and simple; but it is more generally known as Neo-Kantianism, so far as that is considered as a definite doctrine, and not merely as a philological activity.

The historian of Materialism, then, was not himself a Materialist. He called himself a Critical philosopher, and it was his belief that Kantianism is a final refutation of the claims of Materialism to be a complete account of the world. The importance assigned to Kant in this reference is apparent in the somewhat disproportionate division of the contents of the book into “Materialism before Kant” and “Materialism since Kant”. The division seems inappropriate, because very little indeed is said of systematic Materialism since Kant; the first part, in short, contains nearly all the history, while the second is an exposition of principles and a statement of results. Objection might also be taken to it, because the principle of division does not arise out of the subject-matter; the Kantian philosophy was not developed in relation to Materialism. These formal objections, however, may be dismissed, when the peculiar relation is considered, which Lange believed to exist between Materialism and speculative philo-

sophy in general. This relation it was that induced him to write his *History*. He is not a Materialist, but he maintains that Materialism is relatively true as compared with all other philosophical systems (except Kantianism). It is in his view the only consistent theory of the universe, and within its own limits it may claim to be demonstrated with increasing clearness by the progress of science. But it has its very definite limits which it reaches almost at the outset of its development; and no amount of progress in the reduction of phenomena to modes of mechanical motion can ever enable it to overpass them. It is by the recognition of such a limitation that Lange separates himself from dogmatic Materialism. "Atomism is as little able to-day as in the time of Democritus to explain even the simplest sensation of sound, light, heat, etc. . . . Science is for ever precluded from finding a bridge between what the simplest sound is as the sensation of a subject—mine, for instance—and the processes of disintegration in the brain, which science must assume in order to explain this particular sensation of sound as a fact in the objective world. . . . The sensation is not in the *individual* atom and still less is it in an aggregate of them. It is produced and determined by means of a *Form* in which the atoms act in mutual co-operation. But Democritus was careful not to follow up the formalistic side of his own theory, which leads into the depths of metaphysic. Here it needed the Kantian critique of reason to throw the first weak ray of light into the abyss of a mystery, which, after all the progress of our knowledge of nature, is yet to-day as great as it was in the time of Democritus" (*Translation* I. 23, 28). Sensation, then, as a subjective modification, and the formal unity which it implies, constitute the rock on which Materialism must always split; that is to say, Materialism is incompetent to the explanation of consciousness in its lowest as in its highest manifestations. And it is just here that Lange falls back upon Kant. A sensationalistic scepticism had already, at different times, demonstrated the impossibility of establishing the Materialistic position. To Protagoras, to the Berkeleian analysis, to Hume, Materialism is powerless to reply. But Scepticism, Lange seems to say with Kant, is not a permanent state for human reason. So far as Sensationalism is not eked out, as it is in Berkeley, by dogmatic assumptions, it passes into unmitigated Scepticism. But Scepticism is not sure even of itself, and it paralyses reason by casting the shadow of doubt over the whole structure of knowledge. Kant, on the contrary, draws the boundary-line between our necessary knowledge and our necessary ignorance. He shows us what we know and in what sense we know it; what we are ignorant of and why we must remain ignorant of it. Lange follows here, it may be said, Kant's own view of his relation to Hume. Lange believes that he holds in its main outlines the Kantian scheme of the world as it appears to the theoretical reason. The accuracy of his contention will be afterwards examined, but it is necessary first to sketch the nature of this *soi-disant* Kantianism.

In Kant, according to Lange, we find the tables completely turned

upon Materialism and the formalistic aspect of the world triumphantly vindicated. The nature of experience is here proved to depend upon "the organisation of our thought". It follows immediately from Kant's Copernican reversal of standpoint that "the objects of experience altogether are only *our* objects; that the whole objective world is, in a word, not absolute objectivity, but only objectivity for man and any similarly organised beings, while behind the phenomenal world, the absolute nature of things—the thing-in-itself—is veiled in impenetrable darkness. . . . Our whole experience is conditioned by an intellectual organisation which compels us to experience as we do experience, to think as we do think, while to another organisation the very same objects may appear quite different, and the thing-in-itself cannot be pictured by any finite being" (*Trans.* II. 156, 158). In other words, our Ego—the supreme form of knowledge—being furnished with the categories and the intuitions of space and time, determines accordingly, or translates into this language, the raw material (unknowable till so translated) which is given to it in sensation from an unknown source. The atoms, therefore, and the space in which they move are creations of our own thought, and the reality which lies at the bottom of this phenomenal world remains, as Lange says, "veiled in impenetrable darkness". Matter, as we know it, is the product of our "physico-psychical" organisation (an organisation, that is, which may be indifferently regarded as physical or psychical). We cannot overleap our organisation, and, accordingly, we can never know what the reality of the universe is; but so much at least is plain, that it is not matter that makes us, but we who make matter. We do not, however, know even ourselves as we really are. Reality is as much hidden from us here by translation into the terms of the organisation as it is elsewhere. "The transcendent basis of our organisation remains just as unknown to us as the things which act upon it. We have always before us merely the product of both" (*Tr.* III. 219). Experience is thus a connexion of ideas due to the interaction of two unknown factors. Inasmuch as our ignorance of these factors is absolute, it does not appear why we should say that there are two; how do we know that the organisation and the so-called matter extended to us in sense do not both spring from a common root? They may both be the manifestation of "an unknown third".

Such being the schema of Lange's world, the limits are apparent within which Materialism is relatively justified. All phenomena, he says, are ultimately reducible to matter in motion; where science has not actually reduced them to this expression, their ultimate reducibility is still a necessary hypothesis. The term 'matter,' perhaps, cannot be sustained; for science tends more and more to dissipate the solid atom and transform it into a mere ideal point or centre of force. But the mechanics of motion are not affected by such a change in the mode of conceiving their basis. This mechanism constitutes the ultimate expression of the phenomenal world, even of that part of it which is the basis of consciousness in man. Changes in the actual

world are not brought about by abstractions like thought and will. All changes are transformations of energy and can be rigidly traced to mechanical antecedents; states of consciousness are merely the subjective accompaniments of these changes. The human consciousness, in the whole range of its thoughts, feelings, and volitions, is on its physical side a part of the unending transformations of energy; and, as psychical is merely the physical contemplated from another side, it may be said roundly that man himself is altogether included within the circle of mechanism. At this point, however, Lange puts in his caveat. We must not forget that the whole world of science is the creation of our own organisation, and we have no means of knowing whether it corresponds to the truth of things. In the very act of determining the world of the senses as phenomenal, we make room for at least the possibility of another world, which we may, if we like, call, with Kant, the intelligible world, but for which Lange prefers the name ideal. There is, moreover, an architectonic tendency in our nature—an impulse after harmony and unity—which refuses to rest satisfied with the picture of the world as unrolled by science. To speak with Kant, the nature of our intelligence is not exhausted in the senses and the understanding: Reason with its Ideas must be added before the account of experience is complete. Reason, in the special Kantian sense, is pre-eminently the faculty of synthesis. The Ideas are presented in the theoretical sphere merely as ideals, or rather as principles of method; but Kant endeavours, as every one knows, to demonstrate their reality in Ethics and in the system of Ethico-teleology based thereon. Lange, however, puts aside Kant's whole activity outside the limits of the theoretical reason. "The whole practical philosophy is the variable and perishable part of Kant's philosophy. Only its site is imperishable, not the edifice that the master has erected on this site" (*Tr.* II. 155). At this point, therefore, Lange connects himself more loosely with Kant. He accepts from him merely, on the one hand, the notion of an ineradicable tendency in human nature to construct for itself the idea of a harmonious whole, and, on the other hand, the "site" left vacant for the satisfaction of this tendency by the limitative conception of the *Ding-an-sich*. "The postulated possibility" of this ideal world rests, as he expresses himself, "on the notion of things-in-themselves as opposed to phenomena." On this site, then (namely in the vast sphere of possibilities left vacant by the conception of human reason as merely a contingent form of representing things-in-themselves), we are free, nay, we are irresistibly impelled, to build up a world that shall satisfy our ideas of order, goodness, and beauty. But let us beware of applying to our construction the category of truth. The ideal world is not a world of facts; it is a world of "values" (*Werthe*); and it fulfils its function if it satisfies and elevates its constructor. Truth is a conception valid only in speaking of the absolute nature of things (which is veiled in impenetrable darkness), or in speaking of the empirical truth which consists in connecting particular with particular correctly within the mechanism of the sensuous world.

Nevertheless the systems of metaphysicians, the ideas of religion, and the creations of art are all justified. But they are justified precisely on the same ground; all alike are shaped by free phantasy to be a refuge for the human spirit from the unsatisfying nature of the actual world. The ideal world, just because it is ideal, is not real; yet we flee to this 'realm of dreams' as to "the true home of our spirits". Its clear atmosphere leaves us braced up and internally satisfied, as we can never be by what appears, from this ideal height, as "the heavy dream of actual life" (*des Lebens schweres Traumbild*). Such has been the beneficent function of poetry in all ages, and such may continue to be the function of metaphysic and religion, if men will consent to treat them not as science but as poetry. All the errors of metaphysic in the past and its pernicious influence on scientific investigation have been due to the want of this transcendental topic, as it may be called—to an ignorance, that is, of its true sphere. It is imperative that metaphysic and religion be co-ordinated not with science or knowledge, but with the artistic impulse in man. The future progress of humanity and its escape from the paralysing influence of Materialism depend on the capacity of men to grasp this distinction and to elevate themselves to "the Standpoint of the Ideal". For metaphysic, religion, and (in a certain sense) ethics have no resting-place for the sole of their foot within a world which is proved to be a mechanical system; and this conviction must by and by come home to the general consciousness of mankind. It is essential, then, that a refuge be provided against that day, and it can only be supplied by such a view of the Ideal as has been sketched. A perfect example of such a use of the Ideal is presented to us, according to Lange, in the philosophical poems of Schiller. It is not to be forgotten that the impulse towards the more beautiful and perfect world of poetic synthesis springs at bottom from the same transcendent root of our nature which gives us through the senses the picture of the actual world. Yet this should not inspire any craving after a possible actualisation of those ideal forms. The *mythus* is to be accepted frankly once for all as *mythus*. (See Preface to Vol. II. of the *Geschichte*, written within a year of Lange's death.)

Two points require to be considered in regard to this somewhat striking theory. First, Is it a legitimate interpretation and development of the Kantian theory of knowledge? Second, Is it a real deliverance from Materialism, or in itself a tenable philosophic position? Both of these questions must be answered, it seems to me, in the negative.

The denial of the possibility of real knowledge and the consequent abolition of all ontological theories, including Materialism, may certainly be presented with some plausibility as the gist of the *Critique of Pure Reason*; but if everything is left out of account except this, there is really no distinction left between Kant and Hume. Custom will serve quite as well to connect our sensations as an "organisation" whose basis remains completely unknown. And the notion of the thing-in-itself is so far from being peculiar to the Kantian philosophy,

that it must, on the contrary, be regarded there merely as a 'survival'. It was by the presupposition of such a thing that Hume was able to dissolve 'the ideal theory,' as it was called, into scepticism. The nerve of Scepticism has always been a supposed reality in the background, which man's faculties did not enable him to reach. And no sceptic, I imagine, would deny the possibility of utilising this vague background as a site on which to build up ideals of the fancy; though he probably would not consider that this constituted a new philosophic position. There is evidence all through the *History* that Lange draws no distinct line between Scepticism and Criticism. He says, for example, of D'Alembert that "he felt himself tempted to believe that everything we see is but sense-appearance, that there is nothing outside of us corresponding to what we believe we see. He might have become for France what Kant became for the world, if he could have held fast to this idea and had raised himself but a little (*nur einigermassen*) above the level of a sceptical fit". This makes Kant merely the definite expression of a mood as trite as it is idle. The "fit" is raised, according to Lange, to a settled conviction by the results of the physiology of the senses. Kant's "lasting merit" is his proof "that our categories play the same part here as our senses". By way of explanation it said that the categories, or 'Begriffe,' do not themselves exist prior to experience, "but only those dispositions (*Einrichtungen*) by which the impressions of the external world are combined and arranged in accordance with these conceptions. Perhaps some day the basis of the idea of cause may be found in the mechanism of reflex action and sympathetic excitation. We should then have translated Kant's pure reason into physiology and made it more easily conceivable" (*Tr.* II. 211). This is followed up in a later chapter by the assertion in so many words that "the physiology of the organs of sense is developed or corrected Kantianism". As an additional proof that this was the habitual light in which he regarded the Kantian position, we have the incidental remark that "in Kant's time the knowledge of the dependence of our world *upon our organs* was generally in the air". The gist of Lange's Kant is thus the physico-psychical organisation; itself a manifestation of x , it receives impressions from an unknown source, and the result of this interaction is the phenomenal world. Such an idea, however, is not Critical but Dogmatic. Dogmatism may be said to consist in the assumption of 'things' (material or spiritual) prior to experience out of whose action experience is constructed. Criticism, on the other hand, aims by an analysis of experience, as such, at discovering its necessary elements; and one of its results is to exhibit the opposition of subject and object—the two 'things' of Dogmatism—as constitutive of the very notion of self-consciousness. Criticism, therefore, does not, like Dogmatism, *transcend* experience either on the side of the subject or of the object; its subject and object are within the process of experience, which the Critical philosopher necessarily regards as his given unity. I do not contend that Kant himself consistently adhered to this point of view; otherwise it would have been impossible

for Lange to have found any support for his own scheme in Kant. But Lange's substitution of the notion of a physico-psychical organisation for the Kantian unity of self-consciousness and the categories is not an occasional divergence, but a total lapse from the Critical position. Lange's account of the organisation is very vague, but it is plain, at any rate, that he transforms conceptions which are intended to express the nature of experience itself as a unity into a subjective *prius* or disposition which receives impressions. He betrays himself in a note criticising Cohen (*à propos* of the transcendental deduction of the categories):—"If we push too far the emphasis on the *merely transcendental* standpoint, we come, as already hinted, to the tautology that experience is to be explained out of the conditions of possible experience in general. The categories must necessarily be *something more* (noch Etwas) besides being conditions of experience. This with Kant is to be sought in their designation as 'primitive conceptions of pure reason,' while we have here substituted the organisation instead." (Tr. II. 230. The italics are in the original.) This search after something more—what he calls in another note the "origin" or "cause" of the *a priori*—stamps Lange as a Transcendentalist or Dogmatist. Criticism is just this "tautology". It is an analysis of experience into its constitutive elements, and subsequently, if possible, the presentation of these elements in a complete synthesis. No cause or origin of experience as such can be assigned, and least of all can the cause be found by gathering its constitutive notions together in a focus and hypostatising them as a *prius* in the subject. The search for a cause must, however, of necessity end either in the hypostatisation of experience itself as its own cause, or in the assertion that everything flows from an unknowable x . Lange presents sometimes the one view and sometimes the other; but the question itself is recognised to be essentially unmeaning when the notion of experience is adequately grasped. Lange's statements above are sufficient proof that he had not conceived a standpoint beyond that of Subjective Idealism. It is also plain that, when he is not endeavouring to balance himself at what he considers the non-committal position of Criticism, the organisation or source of the *a priori* habitually appears simply as the mechanism of the senses which transforms the material impact into the knowledge of a world. This is to sink back into the baldest Empiricism and to try to explain experience itself from the action of two things which are nothing save as parts of experience. Matters are not a bit mended by substituting the x and x doctrine, which is expressly given as Kant's at another part of the book,—“the infinitely simple principle,” namely, that “our knowledge arises from the reciprocal action of two things” (Tr. II. 275). The substitution of these veiled mysteries for the sensuous subject and the material object is simply an etherealised survival of the unphilosophical view of knowledge as sufficiently explained by the action of the external world on the human body. This “infinitely simple principle” is not Kant; it is substantially Prof. Huxley's version of Hume. The relics of this common-sense dualism undeniably linger in Kant's theory, but the

theory, taken as a whole, is entirely inconsistent with such an idea. For the insight into this, however, it is essential that the theory be conceived as a whole. Lange's method of retaining the *Critique of Pure Reason* and throwing everything else aside is rude and uncritical in the extreme; it involves the mutilation even of the theoretical reason. The theory expounded in the three *Critiques* and the subsidiary writings unquestionably formed a unity in its author's mind, and the significance of some of the conceptions introduced into the *Pure Reason* only appears at a later stage of the philosophy. However little, therefore, the theory may be maintainable in the form in which Kant left it—and this holds of the theoretical results no less than the practical—it is plain that we cannot proceed by an arbitrary selection of parts which are necessarily incomplete in themselves. If we wish to retain it, we must reconstruct the whole system from within in accordance with its fundamental principles. This would carry us, however, tolerably far from Lange.

As regards Lange's transformation of the Kantian Ideas of Reason it must be pointed out that Kant's Ideas are of immanent action upon the development of experience, and that they are the same for all men. In respect of their 'reality,' therefore, they may claim to stand upon the same footing as the Categories; their ideality as 'objects' means, as maintained by Kant, that completed experience is an impossibility to a creature whose essence it is to be limited to a part. Lange's Ideal does not represent, like Kant's, the necessary synthesis of the actual, as it is implied in self-consciousness itself. His organic impulse carries him into 'the intense inane' out of all reference to knowledge; and it contains, therefore, no safeguard against the extreme of subjective caprice. Each man may build what pleases himself most, for he knows that it is all in the air. It ought to be added, however, that Lange replied, when the arbitrariness of his Ideal was urged against him, that he assumed "a necessary course of development in the ideas of humanity. Not any poesy whatever can serve our purpose, but only that which is adapted to our time and to the character of our culture" (*Tr.* III. 187 note). This sweeping admission goes far to cut at the root of the purely poetic character of the speculative and religious ideas of mankind. The following considerations may help to elicit the truth that suggested to Lange the inclusion of these synthetic efforts within the realm of poetry. The sciences, it must be considered, deal with the parts of the actual; they isolate different spheres for examination, and, in proportion to the smallness of its bit of experience or to the degree of its abstractness, a science possesses a more or less exhaustive knowledge of the phenomena of which it professes to give an account. Now philosophy sets out to give an account of the whole, to present the whole as a knowable system—as a system, therefore, in which the apparent separation of the knower and his objects is finally resolved. It is evidently absurd to expect that this ultimate synthesis can ever be laid before us for inspection in the same way in which any particular connexion of phenomena—of sense-objects—can be presented and de-

finitely known. We can at most get the schema or outline of an explanation; and philosophy, as reflecting the collective thought of mankind, progressively makes the schema clearer and more adequate. In one sense, then, the ultimate synthesis may be said to be without the pale of science; for the sciences deal with determinate facts, whereas philosophy may be said to be concerned with the supreme hypothesis on which all facts depend. But Lange has passed at a stride from science, as concerned with truth, to poetry, as dealing with the avowedly mythical. The hypothesis, on the contrary, is nothing, if it is not an attempt to reach the truth of the actual. It is the actual world expressed in its last terms—the only conception of the actual which is found to be ultimately not self-contradictory. Only thus is it possible that there should be “a necessary course of development” in the speculative ideas of mankind. As soon as these ideas are robbed of all pretensions to truth it is quite certain that they will be completely discarded, and poetry, too, will lose its ideal reference to the all of things. If Materialism be destined to conquer the real world, then the ‘Reich der Schatten’ will afford man no compensation.

These considerations have already involved us in the answer to the second question—Is the position tenable in itself, and is it a satisfactory refuge from Materialism? In setting up such a refuge Lange, of course, admits that Materialism is not a sufficient philosophy of human experience. But instead of trying to formulate a fuller philosophy which should embrace mechanism as explaining only one stage of experience, he somewhat naïvely follows the Materialists in their identification of reality with the world of the senses. His “flight” into the Ideal is the result of terror at the consequences of his own admission. Lange states an important truth when he says that “a healthy philosophy cannot too sharply and energetically take Materialism into its protection”. There has been too much weakminded, shrieking Idealism. But that is very far from meaning that intelligence is to bind itself by the lowest of its categories. Criticism, properly understood, prescribes no such limitation. It is true Kant’s categories in the theoretical reason include no more than the categories of matter; but he expressly exempted the unity of self-consciousness from their sway, and in his Ethics he began to develop the categories of the self-conscious life under the form of a realm of Ends. ‘The higher nature in nature,’ as Goethe called it, is as much a datum of experience as the mechanism of physics, and the higher or more complex categories which are needed for its explanation have *primâ facie* an equal right to be considered real. To say anything else is to beg the whole question in dispute at the outset. The current tendency to consider a phenomenon explained by so-called resolution into its simplest elements is often very illusory. The simple elements may be there, but the “living bond” that united them too often vanishes in the process of analysis. And after all, *this* was the phenomenon to be explained; the whole is the union of the parts, not the different parts separately. The idea of an organism is a case in point, as seems

to be admitted by Lange himself. "Obviously," he says, "with the union into a whole a new metaphysical principle is introduced, which, by the side of the atoms and void space, appears as a sufficiently striking supplement" (*Tr.* I. 144). The supplement, however, is necessary, or, in other words, we want higher categories here than those of mere mechanism. The relation of the parts of an organism to one another and to the whole cannot be expressed simply in terms of reciprocal causality. To reduce the one to the other just means that we ignore their difference; we quietly drop the distinctive quality of the organism in the downward movement, and as quietly let it glide into our account as we ascend. So the process appears plausible; but difference is difference in spite of all attempt to reduce the world to a dead level of identity, and thought cannot make a simpler notion do duty for a more complex. A philosophy which faces this fact and allows to all the categories their justification will not be afraid of Mechanism. Instead of merging the higher in the lower, like Materialism, such a philosophy will, in a sense, reverse this principle and find the lower forms intelligible only in the light of the highest of all—self-consciousness.

Comment on the merits and defects of the different parts of the *History of Materialism* must be brief after this long criticism of the standpoint. It must be said, however, that, in the historical part, his point of view often makes him unfair to distinctively speculative thinkers. The *History* is, to a certain extent, a general view of human thought; and if it is accepted as such, the estimate of the relative importance of different thinkers would often require to be reversed in the interests of impartial statement. Socrates, Plato and Aristotle come badly off; the chapter in which they are despatched is rambling and inadequate. It is labelled "Reaction," and the chapter on the philosophy of Leibnitz is headed in the same sinister way. Similarly the sections on the post-Kantian metaphysical systems and the sarcastic allusions to the "Begriffsromantik" strewn thickly up and down the book are no more than telling pieces of claptrap and betrayals of ignorance. Lange cannot disabuse himself of the idea that "metaphysic" means the assertion of transcendent causes, which henceforth operate to disturb the calculations of science. Hence he brings ungrounded charges against systems, which, though they did not despair of philosophy, were yet more truly immanent in their synthesis than Lange himself. The "Period of Transition," *i.e.*, the part of the book dealing with the Middle Ages and the Renaissance, is sketchy and often irrelevant. In the 17th and 18th centuries he is much more successful. Of the section on Kant there is no need to speak farther. The elaborate criticism of the results of the sciences which follows is probably the most useful part of the book, though from the progressive nature of the subject it will, no doubt, soon become in great part out of date. Lange's criticism is often extremely acute; for example, in the chapter on "Force and Matter," where he demonstrates the complete relativity of these two conceptions. The atoms being reduced to purely hypothetical

points, there is left to science only the statement of relations (*Beziehungen*). He concludes this triumphant exposition of the antinomies of Materialism by referring the whole question to the distinction of substance and accident in the theory of knowledge. His criticism of Darwinism is interesting as eliciting from him the assertion of a "law of development". He adheres to Nägeli's view that there is in organisms "an innate tendency to progressive development," which is only negatively controlled by the struggle for existence. The struggle sifts out the actual forms from those which are possible according to the law of development. Lange thus maintains "the co-operation of inner formative causes with the conditions of existence". Darwin, he says, is one-sided here in his application of the principle of utility; he "has treated the everywhere *co-operating* cause as though it were the only cause". On the contrary "the principle of utility becomes impotent if a modification of an animal is required of it which is against the law of development". Darwin's doctrine must therefore be completed by the assumption that "the circle of possible variations" is determined by such a law. Applying this to comparative embryology, he points out that morphologists incline to exaggerate the consequences of the external similarity of the ova at an early stage; the most important differences must be already established in the germ to account for the radically different course of subsequent development. Lange explains the law of development as "nothing else than the co-operation conceived as a unity of the universal laws of nature in order to produce the phenomenon of development". The statement is noteworthy, and it is naturally followed by the admission of "a teleology which is not only compatible with Darwinism, but almost identical with it". This, it may be observed, is a departure from the Materialistic doctrine of a purely fortuitous origin and progress of the universe. It implies that the End was in the beginning, and that mechanism functions only as the instrument of such an immanent End. In a later chapter Lange condemns severely the method of phrenology, which in lieu of one soul creates nearly forty. "We must explain the engine from its separate wheels," and not make each separate wheel a complete engine. Here our plain beginning is in the investigation of the conditions of reflex action. The last section of the book, on "Ethical Materialism and Religion," is devoted to the social questions of the present time. Lange combats the notion that the harmony of interests is the natural result of the unimpeded action of a purely egoistic society. His lively sympathy with the lot of the masses leads him here to form semi-socialistic ideals. The large heart of the man appears throughout the section, which is attractively written, though here and there almost gossiping in tone: Ueberweg's likes and dislikes in the matter of hymns, it has been remarked, are scarcely within the scope of a History of Materialism. The last chapter of the book is called "The Standpoint of the Ideal," and in it he recapitulates and elaborates his own remedy for the ills of humanity.

If it were necessary to choose between Lange's original estimate of

his work and some of those since passed by enthusiastic adherents, the former, in my opinion, would come much nearer the truth. Lange aimed at immediate influence, and he would have been contented, he says, had his book been forgotten in five years. The more pretentious form was forced upon him by the reception which his book met with. Even in its new shape, however, it may be doubted whether it will maintain itself permanently. It remains more of a pamphlet than a formal history, and the point of view from which it is undertaken appears to me, moreover, superficial and fallacious. Nevertheless the influence of the book has been great, and certainly not all for evil. Lange is a man whose sympathies are throughout 'on the side of the angels'—a man of warm heart and lofty aspirations. As a thinker, though without the supreme gifts, he is remarkably acute; and he is thoroughly versed in the work and methods of science. His style is clear and trenchant, and invariably interesting. From such a combination of qualities there could not but result a book brimful of instruction and of incitement to thought. The total effect is confusing, but the *History of Materialism* will doubtless continue to be read for a considerable time with a balance of advantage to the readers.¹

ANDREW SETH.

¹ As regards the way in which the Translator has done his work a single word may be added. Mr. Thomas has been deservedly praised for the high general level of accuracy and vigour which his version presents. But a remnant of unintelligible sentences and inversions of meaning still interrupts the even flow of the book. Probably some of these are due to the press, but in a few cases the German particles seem to have baffled Mr. Thomas. On I. 139, "If we find any magnificence in the Aristotelian teleology, yet we must all the more refuse this character to the uncompromising denial of the idea of design,"—ought to run:—"Though we find a certain magnificence, &c., . . . yet this character belongs just as much to the uncompromising denial," &c. The sentence at the foot of I. 214 is quite unintelligible as it stands. On I. 205 Aristotle's doctrine of the *voûs ἁπλοῦς* is twice spoken of as the inseparable reason, the German being "abtrennbar". "Gottesgläubig" (I. 300) should be translated not "Deists" but simply 'believers in God,' the associations of the first term being misleading. "Eingefleischt" (II. 164 and elsewhere) is surely rendered strangely as "incarnate"; 'inveterate' or 'thorough-going' would be better. "Verfechten" (II. 291) is to defend, not to attack. "The wearying struggles for the existence of the soul" (II. 134) ought to be 'disputes about the nature of the soul'. "Ausgleichung der Schuld im Bewusstsein der Menschheit" (II. 120) is not to be translated "equalisation of faults". The reference is to the cardinal Christian doctrine of the Atonement, and the words mean the cancelling or removal of guilt. I would not have mentioned the slip of "rapidly disappearing" as a translation of "*fast verschwindende*," if it had not occurred in such an important passage as Lange's preface to his second volume in 1875. I observe that Mr. Thomas has translated "transcendent" throughout as "transcendental"; as the two words are quite distinct, and as Lange himself was particularly strict in distinguishing them, this is to be regretted. In a less excellent translation such lapses might have escaped notice; and it is only fair to add that, in a book whose subject-matter is extremely various, Mr. Thomas has almost always rendered the terms and the style of the original in accurate and easy English.

Kantian Ethics and the Ethics of Evolution: A Critical Study. By J. GOULD SCHURMAN, M.A., D.Sc., Professor of Logic and Metaphysics in Acadia College, Nova Scotia, and late Hibbert Travelling Scholar. London: Williams & Norgate, 1881. Pp. 103.

This book contains in its first part a criticism of the theory of the Freedom of the Will as developed by Kant and his successors; in the second half there is a discussion of the Kantian ethical system itself in its relation to the doctrine of Freedom, and a criticism of Mr. Spencer's *Data of Ethics*. The criticism both of the theory of the Will and of the ethical theories is very interesting, and, besides being interesting merely as criticism, it leads to a positive result. As regards free-will, the conclusion is that Kant, in his critique of morality, did not succeed in reconciling freedom with his theory of causation; and it is shown historically that his doctrine of noumenal freedom had a tendency to develop into Determinism. After discussing the question of Freedom, Dr. Schurman goes on to the consideration of Kant's conception of the moral law itself; he shows that it is not applicable to actual morality, because it is a purely formal principle and has no content. Then he proceeds to develop out of the ethical system of Aristotle a principle "that differs from the formal law in that it has a content, but agrees with it, in that it is of universal extension". "This is a material principle whose form and content are given in the idea of man as man." "Evolutionistic Hedonism" is then criticised from the point of view arrived at by means of this principle.

The criticism of "The Ethics of Evolution" is for the most part hostile. Dr. Schurman, after showing how Kant's system led to Determinism, adds that we must still accept the doctrine of Freedom though it is inconsistent equally with the theoretical philosophy of Kant and of those who have developed both the empirical and the transcendental side of his philosophy; for it is shown by Kant's analysis of duty to be a necessary assumption in morals. But although the criticism of the ethics of evolution is written from the point of view of Indeterminism, it must be admitted even by evolutionists to be important as a contribution to the discussion of ethical theory. This will be seen when the general argument of Dr. Schurman's book has been given in a little more detail.

The first section is entitled "Intelligible and Empirical Character". Here a summary is given of the results of Kant's critique of knowledge and of his doctrine of the necessity implied in "ought" and its distinction from the necessity we meet with in nature. The world in which the former kind of necessity has place is the noumenal world; that which is subject to the necessity implied in the relation of cause and effect is the phenomenal world. "Man as having an empirical character is determined, as having an intelligible character he is free." But the exact relation between these two characters is far from clear in Kant's account. The best way of bringing out all its implications is to trace its historical development. The result of this mode of studying the theory is that "the Determinism of Schelling and

Schopenhauer is the logical outcome of Kant's doctrine of intelligible and empirical character". In Schelling's doctrine of freedom the thought of Kant has developed almost, if not entirely, into its opposite; and in Schopenhauer's system the development is complete. For the notion of freedom with Schopenhauer is merely this—that each individual remains himself and does not become another, and that his moral consciousness makes him see, whenever he transgresses the moral law, that objectively another action was possible, and would have taken place if he had been another person; it is the being what he is that is inexcusable. Schopenhauer's doctrine of Will is "a one-sided development of the intelligible world in the Kantian system. It lacks the rational element in virtue of which the noumenal character is a law unto itself. . . . But if Schopenhauer's additions to Kant are of a suspicious character, his developments of Kant are essentially logical and consistent. He brought out clearly all that lay in germ in the doctrine of intelligible and empirical character. And, as we have seen, it turns at his touch into a system of Determinism". Thus the distinction of intelligible and empirical character does not succeed in doing what it was intended to do, that is, in reconciling freedom and necessity. But we may regard it as the issue of the weakness and not of the strength of the *Critique*; we may try to find in the immanent principles of the Critical Philosophy a mode of escaping from the contradictions into which Kant himself fell.

This is the aim of the second section ("Freedom of the Will"). Dr. Schurman first notices the position of "the so-called Neo-Kantians, of whom Lange may be taken as the representative". But he declines to follow them in rejecting the practical philosophy as the perishable part of Kant's system. After discussing Kant's analysis of the moral law, he comes to the conclusion that since "Will, for Kant, is nothing more than the correlate on the active side of law on the theoretical side," his doctrine of the autonomy of the Will is correctly interpreted by Hegel's definition of Will as a kind of thinking. Since thought in the Kantian system cannot be peculiar to any individual, it follows that Hegel has drawn for us the consequences of Kant's identification of reason and will in saying that "the spirit has reality, the individuals are its accidents". But the view thus developed causes the categorical imperative to disappear, for human beings "as mere moments and accidents cannot be charged with the fulfilment of an unconditioned duty"; and with the categorical imperative the ground of the Hegelian inference itself disappears.

Kant's doctrine of Will, however, is not consistent. "On the one hand, he pictures freedom as the active self-originating power of reason or will; on the other, as passive subjection to a self-given law." The first view implies the doctrine of a distinction between the phenomenal and the noumenal world. But "there is no ground for separating the phenomenal from the noumenal world when we decline, as the Kantian principle requires, to regard as existent what

can only be described (in Mr. Spencer's language) as unknown and unknowable". The only noumenon Kant was entitled to maintain was "the synthetical unity of apperception," the permanent, "I think". But this is not peculiar to any individual, and, historically, after being universalised by Fichte, it passed into the Absolute of Schelling and Hegel. And Hegel's system (as we have already seen), just as much as empiricism, makes the conception of freedom meaningless for the individual man. Turning to the second view that may be taken of Kant's doctrine of Will, we find that "the law of duty as interpreted by Kant makes no provision for difference of any kind". "His ethical system has two sides, one of which is applicable to pure reason, which is above duty, and the other to material things, which are beneath it. But for man, the only moral being we know, and for whom alone we need a philosophy of ethics, Kant's system has neither application nor validity."

The result of this examination of Kant would seem to be that no philosophical doctrine of free-will is possible. Dr. Schurman, however, attempts to escape from this inference. Freedom, he says, is implied in the relation of "ought" and "can," as set forth in the critical philosophy; it is certainly inconsistent with the phenomenal law of causation: but we must not deny that a thing exists, because we do not see how it is possible; and the law of causation with which freedom is inconsistent is one that cannot be shown to be valid for mind. It is evident that the last argument is the one that is really important in this reasoning. Determinists believe they can explain the moral consciousness consistently with their view of causation, and without trying to get rid of the notion of duty; but if "the category of cause and effect" is not applicable to mind, then of course the problem they set themselves to resolve becomes meaningless. Dr. Schurman's argument against the application of the law of causation to mind is founded on Kant's "Copernican notion". He states it in one place thus:—"If the mind legislate for nature and create from its categories, intuitions and feelings the world we know, is it not evident that the mind itself cannot be conditioned by the conditions it imposes on things?" Now the word "mind" here may be taken in two senses; it may mean the formal element in all knowledge, or it may mean "the empirical consciousness," "the subject-world," as distinguished from "the object-world". Taking it in the first sense, it may be replied that form is conditioned by matter just as matter is conditioned by form, or, as Kant himself says, that the categories are meaningless apart from experience. In experience there is union of matter and form, and the category of cause and effect is one of those forms that are applicable to all experience. If we detach the formal element of experience and imagine it existing separately, then we may, if we like, say that it is unconditioned; but it is shown by Dr. Schurman himself, in his remarks on Hegel's Absolute, that this procedure brings us back to Determinism. Let us now take mind in its other sense, as "the empirical consciousness". If we say that this belongs to the world of things-in-themselves, then,

since the thing-in-itself is, according to this view, knowable, it consists of elements that are subject to relations ; hence, we may make the distinction of "form" and "matter" in the case of things-in-themselves just as in the case of phenomena ; and, because the phenomenon corresponds to the thing-in-itself, every category that is valid for phenomena must have its analogy in the noumenal world. Thus, in whatever way we prefer to state the law of phenomenal uniformity, or the category of cause and effect, there is (since this law applies to all phenomena without exception) a corresponding law for mind.

The third section of Dr. Schurman's essay ("The Moral Principle") begins with a criticism of the Categorical Imperative. He shows that in ethics Kant did not succeed in reconciling rationalism and empiricism, as he did in his theoretical philosophy. The moral law, according to Kant, "can have regard neither to the ends nor to the consequences of our actions, but only to the rules which precede them, to the form of the will from which they have issued. But as it is no empirical principle it cannot have a content ; it is formal, and as such, empty as the Categories or the Intuitions". That is, it cannot, taken by itself, give us any information as to what is, under actually existing circumstances, moral or immoral. And we need not grant that all material principles *as such* are egoistic. "The result, accordingly, is that morality, which we have found inexplicable from the mere form of a universal law, is not incompatible with a principle that differs from the formal law, in that it has a content, but agrees with it, in that it is of universal extension." This principle may be developed out of Aristotle's conception of *εὐδαιμονία*, which may be defined as that mode of consciousness which is desired for its own sake, and is regarded as identical with the absolute good. This is a certain activity of reason by which man is distinguished from other animals. Kant's principle assumes that the individual creates his own morality, while, as a matter of fact, the moral notions of each individual are in part determined by historical conditions. An explanation of this is found in Aristotle, for he shows that the absolute good must be realised objectively, and that, since man is a *Ζῷον πολιτικόν*, its objective realisation can be no other than the State. "In other language, our social institutions are the objective expression of the idea of humanity as it embodies itself in history."

The transition from the third section to the fourth ("Evolutionistic Hedonism") is made by the statement of "a metaphysical assumption" on which Dr. Schurman considers his view of ethics to be based. This assumption is that "duty consists in the realisation of an end or idea for the sake of which alone man exists as moral agent". Thus, in order that ethics may be possible, our conception of the universe must be teleological. "By implication, therefore, we have already rejected an ethical philosophy built on a system of metaphysics directly opposed to the teleological." "Evolutionistic hedonism," as set forth in the *Data of Ethics*, is such a system.

In reply to this, it is open to an "evolutionistic hedonist" to say

that, distinguishing between art (as defined by Mill) and science, he regards ethics as a portion of the art of life or teleology; that this may be opposed to the whole of theoretical philosophy or metaphysics; and that the existence of ethics as a branch of the art of life depending on the selection of one particular ideal end (the welfare of society) from among all possible ends is consistent with any metaphysical assumptions whatever. This reply, however, is not perfectly satisfactory as a mode of dealing with the whole of Dr. Schurman's argument against hedonistic systems. For this argument points to a certain want of completeness in the embodiment, in expositions of the ethics of evolution, of the idea which is arrived at as the result of the preceding discussion of "the moral principle," that is, "the idea of humanity as foundation for morality". But it seems to me that not only can this idea be reconciled with the ethics of evolution, but that it emerges as a necessary consequence of the theory of evolution as applied to ethics, and that it requires this theory for its complete justification. Apart from the theory of evolution, "the idea of humanity" may be arrived at as a consequence of the application of Hegel's doctrine of a universal consciousness to ethics. But the theory of evolution enables us to show the meaning of this doctrine by a psychological deduction which is wanting in Hegel's system, just as it has already explained the meaning of Kant's doctrine that space and time are *a priori* forms of intuition. It justifies the Hegelian idea as a formula of our actual consciousness by developing the conception of "the social organism," by showing that one of the consequences of this conception is that "society is older than man," that each individual has certain relations in the structure of his mind which depend on his forming part of society, and that these relations are more fundamental than his character as an individual. This conception is implied in the *Data of Ethics*, though it is associated there with an "individualism" commented on by Dr. Schurman, which may be compared with the individualism of Kant: but its psychological consequences have been developed by more than one writer, and its importance in ethics was seen by Clifford, for example.

According to the view that is a consequence of this sociological idea, ethics becomes a more strictly limited science than it is generally conceived as being. It is, as Dr. Schurman says, the science of our actual morality, and not of that which is to be our morality at some future time. But, as he himself admits, there is a possible science of which it is the aim "to deduce from the laws of life and the conditions of existence what kinds of action necessarily tend to produce happiness and what kinds to produce unhappiness"; and we have need of such a science. For morality differs in different ages and nations; and actual moral ideals are not perfectly uniform. It is important, then, that we should know in what direction we ought to modify them. And even if we do not call discussions of the changes it is desirable to make in our modes of looking at actions a part of ethics, still it is obvious that they have close relations with ethical

science. Thus some of Dr. Schurman's objections to parts of the *Data of Ethics* are seen to be objections to the use of a particular terminology. Their apparent strength as arguments against hedonism depends on the fact that we cannot help looking on our actual morality as absolute, so long as we remain within the sphere of ethics in its limited sense. But if we regard ethics as a definitely limited science, with a postulate of its own, it must be thought of as subordinated to a science of ends in general. Now, when we reflect on ends in general in a self-conscious manner, are we not compelled to adopt the hedonistic test in some form or other as the final test?

T. WHITTAKER.

De la Solidarité morale. Essai de Psychologie appliquée. Par HENRI MARION, Professeur de Philosophie au Lycée Henri IV. Paris : Germer Baillière, 1880. Pp. 336.

The first thought of a reader fairly well acquainted with recent ethical writings of the utilitarian and evolutionist schools who takes up M. Marion's work may perhaps be that it contains but little that is actually new. His second thought, if he follows out the author's design to the end, will be that just in this lie the merit and significance of the book. M. Marion's aim has been to gather up, to organise, and to exhibit in a manner fitted to call attention to their practical importance, an order of moral facts and conditions of moral development which, as matters of fact, are now substantially undisputed by all, or nearly all, persons who reflect on such things. His title is an exceedingly difficult one to translate in English; and indeed it carries more meaning than belongs to the French word *solidarité* in its common uses. "Morality as a function of organic conditions" is the nearest approximation I can think of to an English equivalent for the idea which M. Marion, as we may gather from his Introduction, intends to convey. Nor will this be enough unless we remember that the conditions in question are not merely those of the individual whose moral qualities are considered, but those of the society in which he lives, by which his ways and thoughts are largely moulded, and in whose organism he is an element. The following passage from the Introduction defines and sums up the purpose of the book:—

"What I mean by *solidarité morale* is the sum of the conditions which, together with the measure of freedom we have, go to make us, as moral beings, such as we are. In the case of each one of us there is connexion between all points at a given moment and continuity between different times. What we are now is in great measure the result of what we were yesterday, and more or less determines what we are to be and to do to-morrow. Nor is this all; however much our personality is separate and self-contained, it cannot escape the action of its environment. The moral organism called character is, like the organism proper, in constant communication with the world surrounding it, and there is an unceasing exchange between them. Natural laws, again, govern the mutual corruption or improvement of men formed into communities. The men of

each generation depend on and are bound for each other, and for successive generations the like relation holds. . . . Such is the universal law of moral phenomena. . . . The study of this is the study of the conditions of human perfection, the search for the causes of moral growth or degradation in individuals or societies.”

M. Marion makes, as implied in this passage, a certain reservation in favour of free-will. This is perhaps to be regretted, not because M. Marion's opinion is illegitimate or unreasonable in itself, but because it springs from the assumption that complete philosophical determinism is inconsistent with a practicable ethical system—an assumption which M. Marion seems to think manifestly inevitable. It appears to me that, in the first place, freedom as maintained by him is consistent with the determinism of the best modern writers on that side, Mr. Shadworth Hodgson for example. But, further, it appears very desirable that the data of ethics should be disengaged as much as possible from metaphysical questions. And this applies emphatically to the free-will controversy. Nobody denies our empirical freedom, the freedom to which Dr. Johnson bore witness in his sturdy dictum. Within certain limits man is free as against the external world, and amenable to motives. The range of practical morality is that within which deliberation between motives is possible. This also is the measure of responsibility, with the saving that an agent cannot escape blame if he has become, chronically or for the moment, incapable of deliberation by his own fault. Whether the outcome of such deliberation is a function of the agent's character, or of his character and a transcendent something else, is a curious problem enough, and might be of some practical importance if we were trying to construct an absolute scale of individual merit. But from the practical and social point of view it seems immaterial. Nobody denies that character counts for much, and is itself to some extent moulded by circumstances. The practical task of a community bent on righteousness is to work for the production of the best type of character directly through education, and indirectly through circumstances. We know that such work may be and has been successful to an extent that makes it amply worth undertaking. So much being known, we may leave aside for this purpose the supposed presence of an irreducible element, giving sometimes better and sometimes worse results than would be given by the calculable conditions. It is certain that on the average the main lines of men's life are settled for them rather than by them. Further on M. Marion compares the course of life to that of a railway train. The speed is under control, but the general direction is not. At certain critical points there is a choice, as at a railway junction, between two or more diverging routes; M. Marion supposes, to make the analogy closer, that the locomotive is rational and can work the points for itself. But how often do we not rely on an external pointsman—it may be a parent, a friend, a teacher, or a spiritual director—even at these junctures? And how often do we not simply take it on trust from him that he knows the line? Few young men can make their choice

of a profession with anything like adequate knowledge, even when the choice is theirs at all. More shortly, the moral judgments of society deal, generally speaking, not with motives but with acts, as M. Marion himself properly notes at the outset. That is, they leave out of consideration the only class of questions for which one's metaphysical view of free-will is ethically relevant.

The main exposition of the book is not of the kind which an epitome can do justice to. For the substance and details of its matter have nothing specially new in them, and its strength is in the cumulative effect produced by their arrangement as a whole. With regard to the formation of individual character M. Marion deals with such points as heredity, early education, and the reaction of intellectual on moral qualities. The importance of habit is dwelt upon, and it is well observed that habit makes itself felt even when we are most deliberate and most endeavour to be impartial with ourselves. An established laxity of thought or practice will disguise itself as a reason, or suggest sophistical excuses, which the agent who yields to the temptation may finally come to believe in. On the other hand, a liberal culture of the intellect has a direct moral value in enabling us to take a larger and a juster view of the courses of action open to us, and the reasons proper to be weighed for and against each. But the right formation and direction of habits is more important still; for the average man is neither very weak nor very firm, neither critically minded nor much attached to dogmas, not given to strict moral analysis, but wishing on the whole to do right, and desirous of having a plausible reason for what he does. He seeks his guidance mainly in example and precedent, and their authority satisfies his conscience. But the power of habit is not confined to particular classes of actions. Moral self-control, aided by the self-approval which is its immediate result, itself becomes a habit if it is practised with success, especially at the critical stages of life. The character is disciplined for future conflicts, and the conflict when it comes is easier. "*Il en est des jeunes volontés comme des jeunes troupes, qui deviennent solides au feu pour quelque affaire heureuse où elles ont appris à se prendre en estime. L'habitude d'être content de soi est une grande force; elle nous rend répugnante et presque impossible la seule pensée de certaines chutes.*"

The moral influences attributable to distinctly social conditions are more systematically treated, and M. Marion has put his chief strength into this part of the book. The more marked kinds of social influence on morality are distributed under the heads of sympathy, imitation, contagion, opinion, and custom. This is of course meant to be a practical, not a strictly psychological arrangement, as the leading principles of sympathy and imitation run all through. Among the social passions derived from sympathy admiration is discussed, and M. Marion has some good remarks on its general tendency. He points out that its influence will be good or bad according to the state of public opinion in the particular society; but that, on the whole, it is more likely to be good than not. For men's professed standard of life, by

which they judge their neighbours, is almost always better than their actual conduct ; and even exaggerated admiration, if it is in the right direction, may do good by creating for its object a reputation to which he is, as it were, bound to live up. Under the head of moral contagion M. Marion very properly shows that good example is catching as well as bad, and that its effects in this way are less noticed only because they are not accompanied with startling incidents, and are regarded as part of the normal course of life. The value of usage as the exponent and guardian of social morality is perhaps a little underrated by M. Marion. He says that a fixed rule, if it prevents ordinary men from falling below a certain average standard, tends on the other hand to discourage extraordinary men from rising above it—to repress moral genius, in short. No doubt there is some truth in this ; but M. Marion seems to overlook the plasticity of usage which has no formal and authentic organ. Moral rules are not defined in the same way as legal rules, or customs capable of being legally enforced. In societies that have once escaped the risk of arrested development—a risk which morality has to take in common with all other social institutions—they have room to grow, and they do grow. Extraordinary virtue begets admiration, sympathy, and imitation, and sooner or later raises the general standard. “The heroic that seemed too hard” becomes a counsel of perfection, and at last a part of common duty. Prejudices and superstitions foreign to the proper matter of morality may indeed entwine themselves in the moral structure of a community, and be a real hindrance to development in some directions. Probably no society is free from such. We know to our cost how deeply the Puritan theory of Sunday—a theory of modern origin, without any kind of solid ground in reason, history, or authority—has rooted itself in the moral sense of a large number of excellent persons in Great Britain. But such examples only show that moral usage and the authority of custom may be partially perverted. A society in which they were wholly or mainly perverse could not exist.

The effect of high social organisation as such, improved communications, prompter execution of the laws, increased mechanical resources, and the like, resembles that of usage in having no distinct moral character in itself. Such things lead, on the face of them, simply to an extension and quickening of social action on the individual. This “*surcroît de solidarité morale*” may, so far, be for the better or for the worse. Closer attention, however, shows that it is on the whole for the better. The forms of social organisation are the Family, the State, and the Church. M. Marion has something to say upon the moral aspects of each of these. For the influence of free political institutions on moral character he adopts the opinion of J. S. Mill, from whose *Representative Government* he quotes at considerable length. Established religions are considered as useful guardians of established morality, though not tending to improvement. M. Marion seems rather to overlook that morality is not the chief object of archaic religions, if an object at all : and it is a difficult and delicate

matter to strike the balance of gain and loss to positive morality from association with religious sanctions and the fixity of religious ideas.

In conclusion, M. Marion insists on the importance of each generation realising the bonds by which it is linked to the past and the future. He justly hopes that increased carefulness and seriousness of living may come of men's often thinking that their children will not only be better off, but will be better men, through their good works, and that on the other hand even those vices which are commonly excused as "hurting nobody but oneself" are fruitful of evil to coming generations. With equal justice M. Marion disregards any danger that may be alleged of the sense of dependence on past history and present circumstances begetting a reckless fatalism. Ill-disposed people will never be at a loss for an excuse, and it is absurd to be afraid of giving them one more. As to the general outlook, M. Marion does not embrace the complacent optimism which looks on the progress of society as a thing assured and safely left to take care of itself—the doctrine of "*Progrès quand même et quoi que l'on fasse*". He thinks improvement will not fall into our mouths, but, equally rejecting pessimism, he thinks it is to be attained by working for it. His practical creed is "an active and militant optimism, eager in will toward the better part and obstinate in belief that such a will is never thrown away". An excellent suggestion which M. Marion makes near the end of his book, and which is easy to act upon, is that parents should keep a family register in which the principal events of each child's life, moral and physical, should be noted. The old-fashioned English tradition of the family Bible is a sort of approach to the general idea, though a meagre one; and after a few generations the history of almost any family, if noted by faithful and tolerably competent observers, would be of no small psychological value. Mr. Galton, if I remember right, has somewhere made a very similar proposal.

F. POLLOCK.

VII.—NEW BOOKS.

[*These Notes do not exclude, when they are not intentionally preliminary to, Critical Notices later on.*]

Lectures on the Origin and Growth of Religion as illustrated by some points in the History of Indian Buddhism. By T. W. RHYS DAVIDS. ("The Hibbert Lectures," 1881.) London: Williams & Norgate, 1881. Pp. 262.

As the title-page indicates, Mr. Rhys Davids has sought to throw light on Religion generally. With this view, he has chosen the leading features and central facts of Buddhism, especially in its early form. The exposition is not burdened with details, but clearly indicates the fountains of emotion and thought whence the system issued fluent. The process of its after-crystallisation is also put

before the reader in distinct and impressive outline. The author's reflections on the story take the form of suggestions for comparative studies. In Lect. I., Buddhism is exhibited as a comparatively modern phase of religion, the reactionary outcome of an aged and effete animism and the polytheism that emerged from it by natural selection and promotion of the fittest "ghosts". When the transmigration-theory had engendered "a vague feeling of helplessness and hopelessness," Gotama swept it away and with it the whole doctrine of souls, including pantheistic monotheism, its highest and last development. Mr. Davids signalises this as an absolutely new departure, and the very pith of Buddhism. But Gotama's retention of a kind of transmigration, namely, the transmission of Karma, apparently in order to appease the sense of injustice excited by the sight of the inequalities of life, the author thinks a fatal mistake and main cause of "the practical failure" of his religion, as Christianity and other religions have failed to come up to the expectations of their founders by putting the new wine into old bottles. In Lect. III., Mr. Davids insists on his view of Karma as the aggregate or resultant of the acts of a series of lives, *making identical* by its continuous self-sameness the individual links in each particular chain. It is the "craving thirst" for further life in the creature flickering out, that brings its accumulated Karma to a focus in the birth of a new individual. The lecturer does not make it very plain, what would otherwise become of the Karma. Would it simply disintegrate and disperse harmlessly? Did Gotama contemplate the destruction of Karma, or only of its *extrinsic* principle of individuation? However this may be, Nirvâṇa or restful blessedness, the state of the Arahāt or perfect man, effects the latter; but Mr. Davids makes a point of showing that as involving the absence of "craving thirst," it does so *merely by the way*. In this connexion, he brings to the front and lays stress on his view of Nirvâṇa, as salvation here and now, its own reward and end, and neither the annihilation of life or of soul or of desire, unless base. He compares it to the kingdom of heaven within us and the peace that passeth understanding of the New Testament. It is not, *intentionally*, even the altruistic prevention of a new person falling heir to Karma. Mr. Davids does not find that it occurred to early Buddhists or Christians to inculcate duties to posterity. He shows that Arahātship is to be attained by "insight," which belongs to the childlike and poor in spirit, and resembles St. Paul's "justifying faith".

The lecture on Gotama's "order" or society is an eloquent and sympathetic account of the rise of that passion for renunciation and abandonment of the world, which was reinforced by devout and ardent attachment to the master. The two lectures on the Canon and the later forms of Buddhism are not less interesting, the latter containing reflections on the parallel between Roman Catholicism and Tibetan-Lāmaism. The lecture on the lives of Buddha teaches that "the Cakka-vatti Buddha was to the early Buddhists what the Messiah Logos was to the early Christians". Cakka-vatti was the pre-Buddhist ideal king of righteousness; Buddha, the ideal perfectly wise man, or

personification of wisdom. These ideals determined the opinions of the disciples as to the person of the Master. So Buddhism may help the understanding of Christian origins, as the Vedas illustrate Classical Mythology. The inculcation of such methods and principles gives this book its greatest value, and it will be esteemed as a discipline even more than as a store of information. [J. B.-G.]

The Religions of India. By A. BARTH, Member of the Asiatic Society of Paris. ("Trübner's Oriental Series.") London: Trübner, 1882. Pp. xxiv., 309.

In this expansion of a sketch that appeared in 1879 in the *Encyclopédie des Sciences Religieuses*, M. Barth gives a summary account of the development of the present neo-Brahmanic Hindû cults from the Vedic religion and early Brahmanism, interpolating briefer notices of Buddhism and Jainism, as reactionary episodes in the evolution, yet showing how they modified the later currents of the main stream. M. Barth regards the Vedic literature as select, esoteric and sacerdotal, rather than popular and naïve. Alongside of it, there always were the superstitions it had eliminated, and inchoate religions, germs of the Çiva and Vishnû cults. He finds a clue to the labyrinth he has to traverse in the frequently recurring words—"The gods are only a single being under different names;" holding that the inner history of India is one long-protracted struggle to realise that formula, without success. The passage to the older Brahmanism was due, he considers, to the obsolescence of the Vedic language with the ossification of the faith for result,—the establishment of a final canon and deification of rite and dogma. Accounting for the appearance of Buddhism, he makes a pregnant remark: "There is always a metaphysical shipwreck connected with the rise of such great sorrows" as pessimism. So the Vedantist absolutism collapsing, Buddhism issued. It had a career, he thinks, because it bore along with its negations the ineffaceable image of the Master, as ideal object of devotion. Its ascendancy he mainly attributes to its cosmopolitan and yet entirely unworldly character; its fall, to its loss of the monopoly of Bhakti, or devout loving confidence and personal attachment, on the rise of neo-Brahmanism with its concrete god-men like Kṛishṇa and Râma. The Avatâras of Vishnû supplied this race. In Kṛishṇa the anthropomorphism was perfected. His subjective correlate is an intenser Bhakti. M. Barth argues that it is most improbable that Bhakti and Kṛishṇa were borrowed. The coincidences in the Indian and Syrian biographies correspond with the most obviously legendary elements in the life of Christ, and are found in the lives of other incarnations. A chapter on reforming sects contains the unique story of how a sect became the Sikh nation. A review of the manifold present aspects and quite uncertain prospects of Religion in India, concludes a work that is no mere compilation. It includes many passages worthy to rank as contributions to a philosophy of history.

[J. B.-G.]

A Manual of Hindu Pantheism; The *Vedântasâra*, translated with copious Annotations by Major JACOB. ("Trübner's Oriental Series.") London, Trübner, 1881. Pp. 129.

This is a bird's-eye view of that explanation of the universe which has contended with the rationale of Kapila for the mastery. The Vedânta, unlike the dualist Sâmkhya, aims at Advaita, a monist representation: whether, in the doctrine of Vikâra, it leaves the world of consciousness and its objects a kind of attenuated reality as emanation of Brahma; or, as in this primer of the more recent and presently dominant form, the doctrine of Vivartta, it dissipates the last residue of reality into Mâyâ, a sort of magical illusory trick, which Brahma (the absolute Indifference of Schelling or Parmenidean Being) plays with himself upon himself, as when a rope simulates a snake. The end of the Vedânta is a practical one, the attainment of happiness, only conceivable as emancipation from life with the griefs and pains, that are of its essence. The commentary explains that "Vedânta" means "the conclusion of the Veda," and thus is a church-philosophy, finding its analogue in Scholasticism, as the outcome of an attempt to complete the circle of speculation within inviolable limits prescribed by authority. It is, therefore, an orthodox rationalism, which exalts inwardness in the form of mystic contemplation. The *Vedântasâra* gives as the burden of the Vedânta, these two sentences: "The knower of the Self passes beyond sorrow," and "He who knows Brahma becomes Brahma." "*Already free*, he is freed," as "one under the delusion that the garland round his ankle is a snake; when told it is not a snake, the snake is removed, although it was already removed." Major Jacob has succeeded in providing "for missionaries and others with little leisure for original research, an accurate summary of the doctrines of the Vedânta." [J. B.-G.]

The Mind of Mencius. By the Rev. E. FABER, Rhenish Mission Society. Translated from the German, with Notes and Emendations by the Rev. ARTHUR B. HUTCHINSON, Church Missionary Society, Hong-Kong. ("Trübner's Oriental Series.") London: Trübner, 1882. Pp. 293.

The author, who has already produced *A Systematic Digest of the Doctrines of Confucius*, here presents a similar account of the doctrines of Mencius (372-289 B.C.), in pursuance of a general plan he has formed to go through the most important Chinese Classics till about 250 B.C. Mencius, living in the century after his master, is the greatest name in the Confucian School. The author, who describes his Digest in a second title as "Political Economy founded upon Moral Philosophy," thus farther expands the description:—

"Mencius is, like his master Confucius, simply a teacher of political economy. To him the State is the sum of all human endeavours, natural and civilised, working together as a united organisation. Through his direct opposition to the socialist, and in lesser degree to the sensationalist, Mencius saw himself necessitated to base his political economy upon ethics, and his ethics upon the doctrine of man's nature. The ethical problem is

for him the utmost development of all the good elements of man's nature. The problem of the organisation of the State is, Under what conditions can the highest aim be set before it? and then that the government shall consciously endeavour to bring about those conditions."

The Brain and its Functions. By J. LUYB, Physician to the *Hospice de la Salpêtrière*. With Illustrations. ("International Scientific Series.") London: Kegan Paul, 1881. Pp. 327.

The author's name has long been identified with a method of brain-investigation, consisting in the microscopic examination of photographic impressions of regularly stratified sections of the cerebral tissue; and in this book he seeks to give the main results of his anatomical inquiry, as a basis first for physiological deductions as to the working of the brain, and next for psychological interpretation with the help of his professional experience as an alienist. He considers himself able to make out, anatomically, that, in the case of three senses at least—sight, touch, hearing—and, more doubtfully, of smell, the ascending nerve-tracks are brought together into distinct ganglia in the thalami before passing on their way to specially localised stations in the outermost layer of the cortex; again that, while the cells of the cortex increase regularly in size in the inner strata, it is from the innermost largest ones that the motor fibres of the system start and pass outwards, after being first brought together into definite ganglionic knots in the corpora striata, corresponding with those of the thalami. The middle-layers, connecting the others, are, he *supposes*, a region in which the impressions received become variously elaborated before they pass out again in the form of motor stimuli. In the nerve-cell the author distinguishes three main properties which he names Sensibility, Organic Phosphorescence ("the property of storing up in itself and retaining the sensorial vibrations which have previously excited it, as we see in the inorganic world phosphorescent bodies preserve for a longer or shorter period traces of the luminous vibrations which have impinged upon them"), and Automatism (power of reacting upon impressions). The exposition of these properties involves already a consideration of certain mental phenomena, especially, under "organic phosphorescence," the facts of Memory; but it is in the final section, dealing with the actual processes that go on in the brain as compounded of nerve-elements with such properties, that the general psychological interpretation is forthcoming. Distinguishing three stages in the cerebral process—(1) incidence, (2) propagation, (3) emission, the author connects with each respectively (1) attention, the notion of personality, conscious perception; (2) "dissemination of sensorial impressions in the plexuses of the psycho-intellectual sphere (genesis of ideas)," "evolution and transformation of sensorial impressions" (including facts of emotion and desire), judgment; (3) voluntary motion. The conception underlying the whole treatment is—that cerebral process is essentially sensori-motor, and that all the facts of mental life are to be understood as the subjective phases of complex sensori-motor events wholly or partially transacted. Credit is due to the author for the consistency

with which he seeks to carry through the conception as he understands it, and it is doing him bare justice to say that his practical experience suggests to him many true and interesting psychological observations by the way. Yet the book as a whole is open to much exception. The anatomy is a curious mixture of over-definiteness and utter vagueness. The fancifulness of the notion of "organic phosphorescence" is not redeemed by increase of insight into the actual details of memory. And everywhere the exposition is marred by the most gratuitous confusion of the physical and the mental. Words of purely subjective import—not only the word "sensibility" which physiologists have long sought to appropriate—are constantly used by the author in such a way as to leave it uncertain whether his assertions are about brain or mind, or rather to make it certain that he has taken no sufficient pains to distinguish between them in any clear sense. To take but one example: How is the assertion (p. 58) to be understood, that impressions from without, on being purified and transfigured by the elements of the thalami, are launched towards the cortex in an "intellectualised" form? No light is thrown upon this remarkable transformation even when it is added immediately afterwards that the elements of the corpora striata, in turn, "materialise" the stimuli sent down to them from above. Altogether, some nicer discrimination is wanted than anywhere throughout the work we have evidence of before it can be allowed that the study of mind henceforth "should properly belong to the physiological physician and to him alone".

Suicide: An Essay in Comparative Moral Statistics. By HENRY MORSELLI, M.D., Professor of Psychological Medicine in Royal University, Turin, &c. ("International Scientific Series.") London: Kegan Paul, 1881. Pp. 388, with 4 Tables.

The author of this work (who just now also comes forward as "Director"-in-chief of the new *Rivista di Filosofia Scientifica*—see, below, p. 159) has expressly revised and abridged the Italian original for the English version. He offers it as "an essay in the synthetic and positive direction which now, through the efforts of the great contemporary English thinkers, rules the psychological and social sciences". In Part I., "Analysis," after proving the increase of suicide during this century he considers, in succession, the various influences affecting the number of voluntary deaths—Cosmico-natural, Ethnological, Social, Individual Biological (Sex, Age, &c.), Individual Psychological; and shows how they affect also the methods and places of suicide. In Part II., "Synthesis" (pp. 355-74), he briefly maintains that "Suicide is an effect of the struggle for existence and of human selection, which works according to the laws of evolution among civilised people," and, in conclusion, urges that the only way to cure the evil is "to develop in man the power of well-ordering sentiments and ideas by which to reach a certain aim in life—in short, to give force and energy to the moral character".

Text-Book to Kant. The Critique of Pure Reason: Æsthetic, Categories, Schematism, Translation, Reproduction, Commentary, Index. With Biographical Sketch. By JAMES HUTCHISON STIRLING, LL.D., Foreign Member of the Philosophical Society of Berlin. Edinburgh: Oliver & Boyd; London: Simpkin, Marshall, 1881. Pp. 548.

It is hardly necessary to go beyond the very particular enumeration of topics and divisions on the title-page for a *first* indication of the scope of this work; detailed notice and criticism are reserved till another time. According to the Preface, the translation stops short with the "Schematism," because the exposition carried so far contains "all that properly and peculiarly is *constitutive* either *of* or *with* Kant (anything else, except the categorical imperative, being either only negative and *regulative*, or simply a corollary)". As to other features of the book:—

"It has been the aim of the commentary to leave as few obstacles as possible between the reader and a full understanding of the *transcendental system* of Kant. . . . In the Index there has been a very special endeavour to provide the reader with a complete referential guide. The Reproduction, that, by way of introduction, precedes the translation, will be found to cover the whole ground occupied by the rest of the book. Executed in 1862, it is all that exists of the 'Exposition of Kant,' which is several times mentioned in the *Secret of Hegel* as prior to that work."

The Problem of Philosophy at the Present Time: An Introductory Address delivered to the Philosophical Society of the University of Edinburgh. (Published by Request.) By EDWARD CAIRD, LL.D., Professor of Moral Philosophy in the University of Glasgow. Glasgow: Maclehose, 1881. Pp. 43.

"The task of philosophy is to rise to such a general view of things as shall reconcile us, or enable us to reconcile ourselves, to the world and to ourselves"; not by any "subjective synthesis" (such as Comte or, in ancient times, Stoics, Epicureans, &c., conceived of) but by an "objective" or "absolute" synthesis which establishes "the indivisible unity of the intelligence and the intelligible world". It is the "re-thinking of a secular and religious consciousness which has been developed, in the main, independently of philosophy". "The task has become, if in some respects a harder, yet in other respects a more hopeful one in modern times" than when Plato and Aristotle, in the circumstances of Greek religion and life, attempted it. Philosophy, since Kant, may "begin its work by a vindication of the religious consciousness. . . . Nor can it fail to discover that the idea on which the higher life of man is founded—the idea of the unity of man as spiritual with an absolute spirit—has in Christianity been brought to light and made in a manner apprehensible by all. Whatever, therefore, may be the change of form to which this idea may have to submit in being applied to our ever-widening knowledge of nature and man . . . we have good reason to be confident that we have in it a principle of universal synthesis which is adequate to the task." Only, for this, Philosophy must now, as never before "emerge from the region of abstract principles and show that it can deal with the manifold results of empirical science, giving to each of them its proper place and value".

Social History of the Races of Mankind. Fifth Division : Aramaeans.
By A. FEATHERMAN. London : Trübner, 1881. Pp. xvii., 664.

This is a somewhat minutely-detailed account of the social condition, manners and customs of the various branches—thirty to forty—into which the author would divide the Aramaean or Semitic stock, beginning with the ancient Phoenicians, Assyrians, &c., and ending with the Sahara Arabs of the present day. The authorities upon which the exposition is in each case based are regularly given at the end of each section, showing the precise extent of the author's inquiry. The work appears to be done with care and discrimination, and the exposition cannot be called other than good, each paragraph containing its bundle of related facts plainly and simply expressed : only, the principles upon which they are ordered might have been made somewhat more obvious. Five other divisions of the work (upon which the author has been already engaged ten years) remain to be published. He distinguishes six stocks in all—Nigritians, Melanesians, Maranonians, Turanians, Aramaeans, Iranians ; and the reasons he has for beginning with the Aramaeans are unconnected with the order of natural development, which is rather that just given. The different stocks are supposed by him to have arisen "under varying conditions in different countries and at different geological periods," from a multitude of pairs in each case. By implication, he seems to deny the existence of any earlier stocks of men.

Descartes. Par LOUIS LIARD, Recteur de l' Académie de Caen.
("Bibliothèque de Philosophie Contemporaine.") Paris : Germer Bailliére, 1882. Pp. 300.

The author confines himself here to an exposition of Descartes' doctrine, seeking, however, on the one hand, to throw light upon it from the science and philosophy of the present day, and, on the other, to understand how the ideas of Descartes were the germs from which modern science and philosophy have been developed. The exposition falls into three parts—"Method" (pp. 3-34) ; "Science" (pp. 35-140) ; "Metaphysic" (pp. 141-295).

Thierrî Tiedemann et la Science de l'Enfant. Mes deux Chats :
Fragment de Psychologie comparée. Par BERNARD PEREZ.
Paris : Germer Bailliére, 1881. Pp. 79.

The author, whose special studies in the psychology of children have been repeatedly noticed in MIND, here presents the more important points in a little-known memoir by Tiedemann which he has previously referred to as the first piece of real scientific observation on a child's mental development ; supplementing them by comparison with the results obtained by Mr. Darwin and in the last few years by M. Taine and others. The second half of the little book is taken up with the record by himself of the earliest doings of two male kittens produced at one birth.

Teoria Fisiologica della Percezione. Introduzione allo Studio della Psicologia del Prof. GIUSEPPE SERGI, nella Università di Bologna. ("Biblioteca Scientifica Internazionale"). Milano : Dumolard, 1881. Pp. 330.

This is a work in the "International Scientific Series" which, if translated by a really competent hand, might go far to fill a blank that is still left in English psychological literature. It presents with some completeness the main results of the later physio-psychological inquiry, German or other, so far as bearing on the scientific question of perception. The author, however, is not concerned with mere reproduction, but seeks to work up the facts into a more exact and sufficient theory of perception than has yet been devised. To prepare the way for this he first criticises the chief English and German theories of recent years, and it is then, as he develops his own theory, that he works in the accepted experimental results. His main object is to show how the complex psychological fact of perception—so much more than the mere fact of sensation which it includes—is physiologically conditioned, as conditioned it must be in all its stages to the last. The plain facts of the case, according to him, are not met unless it is assumed that, when the brain is stimulated from a peripheral sense-organ in the specially localised fashion that first distinguishes perception from sensation, a nerve-current is sent back upon the same lines to the peripheral origin of the stimulus. This "perceptive wave," as he calls it, is the physical circumstance that more immediately determines the fact of conscious localisation at or projection beyond the periphery of the body, which is the salient feature in objective perception. The author brings also into full prominence the function of movement in perception, and rightly formulates [after Horwicz and others] the general assertion that sense-organs are of account for perception according as they have a proper and independent movement. Prof. Sergi's study deserves attention. It may be noted that he is one of those who are joined in the "direction" of the new *Rivista di Filosofia Scientifica*, which proves how well Italy is now to the front in the scientific investigation of mind.

Della Interpretazione Panteistica di Platone. Di ALESSANDRO CHIAPPELLI, già Alunno del R. Istituto di Studi Superiori e di Perfezionamento. Firenze : Le Monnier, 1881. Pp. 284.

An elaborate thesis written in support of the newer view of Plato's doctrine put forward by Prof. Teichmüller (of Dorpat) against the traditional conception of Zeller and others.

Grundzüge der Psychologie. Dictate aus den Vorlesungen von HERMANN LOTZE. Leipzig : Hirzel, 1881. Pp. 100.

In lecturing to students, Lotze followed the traditional Göttingen custom of dictating summary statements of results in the course of freer exposition ; and we have here in print the dictated paragraphs of his lectures on Psychology as they were finally delivered in Göttingen

last winter, and were again in process of delivery at Berlin when death snatched him away, at midsummer, from his new field of labour. The impression was in the first instance designed for the benefit of the large class of students deprived in mid-course of the instruction they expected, but fortunately is also offered to the public. The paragraphs form a continuous exposition, and, compendious though they are, give a better idea of Lotze's whole psychological position than can otherwise now be easily had. Besides being more limited in its reference, the *Medicinische Psychologie* of 1852 is out of print.¹ The exposition is pretty equally divided between a view "of the several elements of the inner life," and a discussion "of the soul," this latter being otherwise designated as "Theoretic Psychology". A preliminary division of all Psychology into (1) Descriptive or Empirical, (2) Explanatory, Mechanical, or Metaphysical, (3) Ideal or Speculative—is not adhered to in the actual course. While Speculative Psychology, which seeks for "the rational meaning" of mental life is left altogether aside as not admitting of scientific treatment, the other two lines of consideration are not held strictly apart. The description of the mental "elements," in the first section, has mixed up with it a considerable modicum of the kind of metaphysical explanation that forms the staple of the "Theoretic Psychology". In the sketch, as it is now printed, Lotze is seen, to the end of his life, eager to incorporate the latest results of positive scientific research, as appears at various points of the account with which he begins of the "simple sensations". His main interest, however, all through, is to suggest or urge, in accordance with the spirit of his general philosophical works (*Mikrokosmos* and others), that by no kind of physical hypotheses or analogies can the plain facts of "the inner life" be accounted for. How definite metaphysical assumptions, whether as to the nature of the soul or the nature of things, may be used in a serious sense to explain the facts of mind, cannot be better studied than in these *Grundzüge*. An appendix at the close, in 8 pp., gives a very careful bibliography of all Lotze's works and occasional writings, drawn up by Prof. E. Rehnisch of Göttingen.

Einfluss der englischen Philosophen seit Bacon auf die deutsche Philosophie des 18. Jahrhunderts. Von der Kön. Preuss. Akademie der Wissenschaften mit einem Preise ausgezeichnete Untersuchung von G. ZART, Dr. phil., Gymnasiallehrer. Berlin : Dümmler, 1881. Pp. 240.

This prize-essay gives a straightforward and sufficiently detailed account of the influence exerted by English thinkers upon all the German philosophers of any note from Leibnitz to Kant (not including general critics like Lessing and Herder). Locke's influence is found to be far the most powerful and wide-reaching, till Hume begins to

¹ Since 1876, however, Book I., in a form revised by Lotze himself, may be had in French, translated by A. Penjon, under the title *Principes généraux de Psychologie physiologique* (Germer Baillière).

rival him as time goes on. Bacon, Hobbes, Home (Lord Kames), Hutcheson, Tucker (quoted always under his pseudonym Search), and Shaftesbury follow after; with Berkeley, Clarke, Ferguson, Hartley, Reid, &c., at a third grade. The author finds the English to have been more powerful than any other foreign influence on his countrymen, and otherwise is of opinion that it deserves especially to be traced because "English philosophy is grander and more typical in character than that of any of the modern continental nations, developed as it has been, almost from first to last, in a continuous, organic, and consistent manner". He can only be encouraged to give effect to the disposition he has to turn next to the subject of the English influence on French thought in the same century.

Die Vorgeschichte der Ethnologie. Deutschland's Denkfremden gewidmet für eine Mussestunde. Von A. BASTIAN. Berlin: Dümmler, 1881. Pp. 132.

Der Völkergedanke im Aufbau der Wissenschaft vom Menschen und seine Begründung auf Ethnologische Sammlungen. Von A. BASTIAN. Berlin: Dümmler, 1881. Pp. 184.

Two vigorous pleas for the necessity of basing the whole science of man upon objective ethnological inquiries, pursued not without the help of subjective analysis but at the same time with the view of correcting and re-casting the conclusions of psychology and philosophy. The one Essay traces the historical rise of the conception of a science of Ethnology; the other develops its fundamental notion of Folk as prior to the individual man, and considers the means of securing by ethnological collections (before it is too late) the only possible insight into whole aspects of human nature. Both Essays are hardly more remarkable for the wealth of curious information poured out by the author from the stores of his reading than for their suggestions of thought.

Das religiöse Bewusstsein der Menschheit im Stufengang seiner Entwicklung. Von EDUARD VON HARTMANN. Berlin: Duncker (London: Trübner), 1882. Pp. 627.

Within less than three years from the appearance of his last great work the author follows up his elaborate survey of the Moral Consciousness by a hardly less extended investigation of the Religious Consciousness of man, viewed in the process of its development. For the present, only the most general outline of the treatment is subjoined: A. Naturalism. I. The awaking of religious consciousness. II. Naturalistic Henotheism. III. Humanistic spiritualisation of Henotheism. IV. Theological systematisation of Henotheism. B. Supernaturalism. I. Abstract Monism or Idealistic Religion of Deliverance. II. Theism (1. Primitive Monotheism; 2. State-religion or the Religion of Heteronomy; 3. Realistic Religion of Deliverance (a. The Heterosoteric Religion of Christ; b. The Religion of the Son and the Religion of the Spirit)).

Die Willensfreiheit und ihr Verhältniss zur göttlichen Präscienz und Providenz bei den jüdischen Philosophen des Mittelalters. Von Dr. LUDWIG STEIN. Berlin : Baer, 1882. Pp. 142.

The first of a series of monographs which the author has in view upon the chief points that engaged the attention of the Jewish Schoolmen ; beginning with the question of Free-will, considered both in itself and in relation to Divine foreknowledge and providence. At the end of his careful and minute inquiry, the author comes to the conclusion that Jewish Scholasticism, like Scholasticism generally, though much to be regarded for the literature of philosophy and the history of religion, has no intrinsic philosophical importance.

VIII.—MISCELLANEOUS.

Mr. B. Bosanquet writes thus :—

In connexion with Mr. Seth's remarks in *MIND* XXIV. on the common conception of Hegel as an *a priori* thinker, it may be worth while to point out a misquotation on p. 20 of Lewes's *Problems of Life and Mind*, Vol. I., which should equally be corrected whether it is a misprint or not, for not many people verify references to Hegel. Lewes is mentioning that Hegel regarded the knowledge of Freedom, Mind, God, as not empirical. The German quotation in the footnote continues—"Sie sind auf jenem Boden nicht darum zu finden weil sie der Erfahrung nicht angehören sollten." I cannot but imagine from the context of p. 20 that Lewes at the moment allowed himself to interpret this to some such effect as—"They are not to be found on that ground (*i.e.*, among the empirical sciences), because they cannot belong to experience." Of course this is impossible German. The real words are—"Sie sind auf jenem Boden nicht darum nicht zu finden weil, &c., &c." "The reason why they are not in the range of the empirical sciences is not that they could be supposed beyond experience ; for though they are not in sensuous experience, yet all that is in consciousness is experienced." The abruptness with which Lewes's quotation breaks off in the middle of a sentence and with a full stop for a semi-colon seems to indicate that he saw a special point in the clause he quoted. I do not suppose that Lewes's view of Hegel was greatly affected by this one passage ; he would find plenty to criticise elsewhere ; but it is just worth noting, if my construction is right, that one so well acquainted with German literature should have allowed himself to make this slip, in consequence, I imagine, of feeling sure that he knew Hegel's line by anticipation. The place is in the shorter *Logic*, § 8.

We are requested to make announcement to the following effect :—

The Philosophical Society of Berlin, originally, from 1843, consisting of Hegelians, but now including men of the most different ways of thinking, has decided to devote the surplus of the money collected for a monument of Hegel to the establishment of a "Hegel-foundation" for the promotion of philosophy. In connexion with the foundation, it will award a prize of

450 Reichsmark (£22 10s), on July 1st, 1884, for the best *Historico-Critical Exposition of Hegel's Dialectic Method*. The subject is thus farther specified :—(1) *Development* of Hegel's method in his writings : How is Dialectic related with him to Logic and Metaphysic ? (2) *Comparison* with the methods of his predecessors : Does his method arise out of them ? (3) *Value and Importance* of the method : Does it fulfil the requirements of a philosophical method ? Essays, which may be written in German, French, English, or Italian, must be sent, post free, before Dec. 31st, 1883, to one or other of the Secretaries of the Society—Professor Dr. Michelet, Bülow-Str. 28, S.W., Berlin, or Stadtgerichtsrath A. D. Meineke, Kurfürsten-Str. 56, W., Berlin—with a motto at the head, and, in a sealed cover, the same motto with name and address of the writer. The sealed covers sent with all but the prize-essay will be burned. The MS. of the prize-essay will be the property of the Society, but the right of printing belongs to the author. Herr Custos Dr. Ascherson, of the University Library, Berlin, will supply copies of the printed program.

Prof. Fechner has received a large number of replies to the schedules of questions he sent out in 1879 (through the "Akademisch-Philosophischer Verein" of Leipsic University), with a view to obtaining statistical data on Associations between Vowel-sounds, on the one hand, and Colours, the Major and Minor Musical Keys and the four Temperaments, on the other. He will proceed to work them up, as soon as he has completed another research on which he is now engaged.

A series of "German Philosophical Classics for English Readers and Students," edited by Prof. George S. Morris, of the University of Michigan, &c., is announced from Chicago (S. C. Griggs & Co.), to begin to be published early in 1882. Each volume will be a critical exposition of some one masterpiece of German philosophy. Prof. Adamson undertakes Kant's *Critique of Judgment* ; Prof. John Watson, Schelling's *Transcendental Idealism*. There will be ten or twelve volumes in all, confined to works of Leibnitz (*New Essays*), Kant, Fichte, Schelling, and Hegel.

Professor Fortlage of Jena died on the 8th of November, at the age of 75.

Mr. John MacCunn, M.A., of Balliol College, Oxford, has been appointed to the Chair of Logic, Mental and Moral Philosophy, and Political Economy in the new University College of Liverpool.

The Chair of Moral Philosophy in Trinity College, Dublin, has become vacant through the appointment of Mr. W. H. S. Monck to the Chief Clerkship of the Court of Bankruptcy, Ireland.

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. XV. No. 2. W. T. Harris—Thoughts on the Basis of Agnosticism. A. Arnold—The Unification of Science. Hegel—On the Absolute Religion (trans.). Schelling—On the Science of the Fine Arts (trans). W. Preyer—On Psychogenesis (trans.) Notes and Discussions. Book Notices.

REVUE PHILOSOPHIQUE.—VI^{me} Année, No. 10. E. Rehnisch—Hermann Lotze, sa vie et ses œuvres (trans.). A. Fouillée—Critique de la

morale de Kant (fin). H. Spencer—La société militaire (trans.). G. Tarde—La psychologie en économie politique (fin). Note (L. Arréat—Sur la nature du syllogisme). Analyses et Comptes-rendus (J. Sully, *On Illusions*, &c.). Rev. des Périod. No. 11. V. Brochard—La logique de J. Stuart Mill (i.). H. Spencer—La société industrielle (trans.). Discussion (J. Delbœuf—Le sentiment de l'effort, d'après W. James). Analyses et Comptes-rendus (F. Y. Edgeworth, *Mathematical Psychics*, &c.). Notices bibliographiques. Rev. des Périod. No. 12. Ch. Richet—Irritabilité et réaction cérébrales. V. Brochard—La logique de J. Stuart Mill (fin). P. Tannery—L'éducation platonicienne. Analyses et Comptes-rendus (C. S. Peirce, *On the Algebra of Logic*, &c.). Rev. des Périod. Correspondance (P. Jacoby—La sélection et l'hérédité chez l'homme).

LA CRITIQUE PHILOSOPHIQUE.—Xme Année. Nos. 32-43. C. Renouvier—Politique et socialisme; (xii.) La question du progrès; Saint-Simon et la physicisme (33); Descartes, Spinoza et Leibnitz (33); L'idéalisme et l'infinisme de Spinoza (34); A propos de Comte (37); Notes en réponse à M. Shadworth Hodgson (40-41—Mr. Hodgson's article on M. Renouvier's *Psychology in MIND XXII.* being now in process of reproduction in *La Crit. Phil.* from No. 38). F. Pillon—L'importance des études philosophiques dans l'éducation (35); M. Bluntschli et ses théories de droit international (41); J. Milsand—A propos de Comte et du positivisme (37, 40); C. Secrétan—Le positivisme et la science expérimentale de l'Abbé de Broglie (43).

LA FILOSOFIA DELLE SCUOLE ITALIANE.—Vol. XXIV. Disp. 1. A. Marconi—La spiritualità dell'anima umana (i.). G. Fontana—*I Sensi e l'Intelligenza* par A. Bain. G. Zuccante—Del metodo di filosofare di Socrate (fine). Bibliografia (J. M'Cosh, *The Emotions*, &c.). Disp. 2. T. Mamiani—Della scienza economica. A. Marconi—La spiritualità dell'anima umana (fine). L. Ferri—Osservazioni e considerazioni sopra una bambina. Bibliografia (A. Fraser, *Berkeley*, &c.).

RIVISTA DI FILOSOFIA SCIENTIFICA.—An. I. No. 1. E. Morselli—La filosofia e la scienza. R. Ardigò—L'individualità nella filosofia positiva. G. Sergi—Il senso di colore nella percezione. G. Buccola—Studii di psicologia sperimentale: (i.) La misura degli atti psichici elementari (con tavola). F. Delpino—Fondamenti di biologia vegetali: (i.) Prolegomeni. G. Canestrini—Intorno all'ereditarietà dei caratteri individuali. G. Cantoni—Metodo del Galileo nello studio delle leggi naturali. P. Siciliani—Della pedagogia scientifica in Italia. Rivista Analitica. Rivista Bibliografica. Rivista dei Periodici. No. 2. A. Herzen—Materia e forza secondo il concetto monistico. G. Buccola—Studii di psic. sper.: (ii.) La durata del discernimento e della determinazione volitiva. R. Schiattarella—S. Vacherot e la legge dei tre stati dello spirito umano. G. Cantoni—Dell'energia nella fisica moderna. F. S. De Dominicis—I seminarii e la concorrenza clericale nell'istruzione pubblica. Rivista Sintetica (G. Buccola—Sui fenomeni e sulla natura dell'ipnotismo). Riv. Anal. (J. Sully, *Illusions*, &c.).

ZEITSCHRIFT FÜR PHILOSOPHIE, &c.—Bd. LXXIX., Heft 2. Th. Weber—Zur Kritik der Kantischen Erkenntnisstheorie (i.). W. Wiegand—Aehrenlese der Kritik u. Erklärung der drei Bücher Cicero's *De Natura Deorum*, nebst einem Nachwort über dessen Verdienste um die Philosophie überhaupt. E. Dreher—Freiheit u. Nothwendigkeit. P. Natorp—Ueber das Verhältniss des theoretischen u. practischen Erkennens zur Begründung einer nichtempirischen Realität. O. Caspari—Ueber Nothwendigkeit im Seyn gegenüber der Denknöthwendigkeit: ein offenes Sendschreiben an Herrn Prof. H. Ulrici. H. Ulrici—Nachschrift. Recensionen.

PHILOSOPHISCHE MONATSHEFTE.—Bd. XVII., Heft 7, 8. J. J. Borelius—Über den Satz des Widerspruchs u. die Bedeutung der Negation. Th. Lipps—Die Aufgabe der Erkenntnislehre u. die Wundt'sche Logik (iv.). Recensionen (W. Wallace, *Epicureanism*, &c.). Literaturbericht. Bibliographie, &c. Heft 9, 10. J. Volkelt—Die Aufgabe u. die Fundamentalschwierigkeit der Erkenntnistheorie als einer voraussetzungslosen Wissenschaft. G. Knauer—Was ist Begriff? J. Baumann—Wundt's Lehre vom Willen u. sein animistischer Monismus. J. Witte—Die Vermittelung der principiellen Gegensätze durch Kant's Kritik der reinen Vernunft u. der virtuelle Apriorismus des letzteren. J. Baumann—Zum Gedächtniss H. Lotze's. Literaturbericht. Bibliographie, &c.

ZEITSCHRIFT FÜR VÖLKERPSYCHOLOGIE U. SPRACHWISSENSCHAFT.—Bd. XIII., Heft 3. H. Steinthal—Programm zu einer neuen Ausgabe der philosophischen Werke Wilhelms von Humboldt. O. Weise—Wortentlehnung u. Wortschöpfung: Sprachgeschichtliche Studie; Verschmelzung der Artikels mit dem Wortstamme. J. Goldziher—Ueber den Ursprung einiger metaphorischer Ausdrücke der arabischen Sprache. G. Simmel—Psychologische u. Ethnologische Studien über die Musik. K. Haberland—Der Geisterweg die gerade Linie; Die Mittagsstunde als Geisterstunde; Der Spiegel im Glauben u. Brauch der Völker. H. Steinthal—Die Humboldt'schen Manuscripte.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE.—Bd. V., Heft 4. Schmitz-Dumont—Die Kategorien der Begriffe u. das Congruenzaxiom (i.). H. Jäger—Das Princip des kleinsten Kraftmasses in der Ästhetik. E. Laas—Vergeltung u. Zurechnung (iii.). Anzeigen, &c.

Other Books, &c., received: P. Geddes, *The Classification of Statistics and its Results*, Edinburgh (Black), pp. 30. A Christian Theist, *A Letter to the Rev. Charles Voysey*, London (Provost), pp. 32. G. Mallery, *The Gesture Speech of Man*, Salem, U.S.A. (Reprinted from *Proc. of the Am. Assn. for the Adv. of Sciences*, XXX.), pp. 33. G. Sergi, *Fisiologia e Psicologia di Colore*, Milano (Dumolard), pp. 40. N. Fornelli, *L'Insegnamento Pubblico ai Tempi nostri*, Roma (Forzani), pp. 412.

PHILOSOPHISCHE STUDIEN.—Herausgegeben von Wilhelm Wundt. Bd. I., Heft 1. W. Wundt—Ueber psychologische Methoden. M. Friedrich—Ueber die Apperceptionsdauer bei einfachen u. zusammengesetzten Vorstellungen. J. Kolbert—Untersuchungen über den Zeitsinn. W. Wundt—Ueber die mathematische Induction. [This new publication (pp. 147, Leipzig, Engelmann) comes to hand, as we are going to press. Though it appears without any such announcement, we understand that the present issue will be succeeded by others at intervals of three months or thereby. Practically, it is the first No. of a new philosophical Journal.]

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.



I.—CAN THERE BE A NATURAL SCIENCE OF MAN?

II.

IN resuming the discussion which we began in the last number of MIND, it will be well to remove a misapprehension, arising from an ill-chosen title, which may have prevented believers in 'Anthropology' from giving an unprejudiced attention to the discussion. It is not at all intended to dispute the possibility of a valid natural science dealing with human nature in certain of its aspects. The point at issue is whether any such science can deal with the ultimate principle of knowledge and of morality in man. In the last number we were following the lead of Kant in inquiring what is necessary to constitute, what is implied in there being, a world of experience—an objective world, if by that is meant a world of ascertainable laws as distinguished from a world of unknowable 'things-in-themselves'. We have followed him also, as we believe every one must who has once faced the question, in maintaining that a single active self-conscious principle, by whatever name it be called, is necessary to constitute such a world, as the condition under which alone phenomena, *i.e.*, appearances to consciousness, can be related to each other in a single universe. This is the irrefragable truth involved in the proposition that 'the understanding makes nature'. But so soon as we have been brought to the acceptance of that proposition, Kant's leading fails us. We might be

forward, from the work thus assigned to understanding in the constitution of nature, to infer something as to the spirituality of the real world. But from any such inference Kant would at once withhold us. He would not only remind us that the work assigned to understanding is a work merely among and upon phenomena; that the nature which it constitutes is merely a unity in the relations of phenomena; and that any conclusion we arrive at in regard to 'nature' in this sense has no application to 'things-in-themselves'. He insists, further, on a distinction between the form and matter of 'nature' itself, and having assigned to its 'form' an origin in understanding, ascribes the 'matter' to an unknown but alien source in a way which seems to cancel the significance of his own declarations in regard to the intellectual principle necessary to constitute its form. We do not essentially misrepresent him in saying that by the 'form' of nature or, as he sometimes phrases it, '*natura formaliter spectata*,' he means the relations by which phenomena are connected in the one world of experience: by its 'matter,' or '*natura materialiter spectata*,' the mere phenomena or sensations undetermined by those relations.¹ '*Natura formaliter spectata*' is the work of understanding; but '*natura materialiter spectata*' is the work of unknown things-in-themselves, acting in unknown ways upon us.

Now, if the distinction, thus drawn, between the form and matter of the world of experience were necessary or even admissible, the effect of tracing those relations between phenomena, which form the laws of nature as we know it, to the action of a spiritual principle, will simply have been to bring us to a deadlock. The distinction implies that phenomena have a real nature as effects of things-in-themselves other than that which they have as related to each other in the universe of our experience: and not only so, it puts the two natures in a position towards each other of mere negation and separation, of such a kind that any correspondence between them, any dependence of one upon the other, is impossible. As effects of things-in-themselves, phenomena are supposed to have a nature of their own, but they cannot, according to Kant's doctrine, be supposed to carry any of that nature with them into experience. All the nature which they have in experience belongs to them in virtue of relations to each other which the action of the intellectual principle, expressly opposed to the action of things-in-themselves, brings about. The nature which a sensation is supposed to possess, '*materialiter spectata*,' as the appearance of a thing-in-itself, must not be confused with its nature as conditioned by a particular mode of matter and motion—the nature which the

¹ *Critique of Pure Reason*, Ed. Hartenstein (1868), p. 133; Ed. Rosenkranz, II., p. 755.

man of science investigates. It is probably from this confusion that Kant's doctrine of the relation between phenomena and things-in-themselves derives any plausibility which it may have for most of his readers: but, after what has been said above, a moment's consideration will show how unwarrantable according to his principles it is. The nature of a sensation, as dependent upon any motion or configuration of molecules, is still a nature determined by its relation to other data of experience—a relation which, like every other relation within, or capable of coming within, experience, the single self-distinguishing principle, which Kant calls understanding, is needed to constitute. It is not such a nature, but one to which no experience or interrogation of experience brings us any the nearer, that we must suppose to belong to the phenomenon as an appearance of a thing-in-itself, if Kant's antithesis is to be maintained. And if phenomena, as 'materialiter spectata,' have such another nature, it will follow—not indeed that all our knowledge is an illusion in the ordinary sense of the term, for that implies a possibility of correction by true knowledge but—that there is no ground for that conviction of there being some unity and totality in things, from which the quest for knowledge proceeds. The 'cosmos of our experience,' and the order of things-in-themselves, will be two wholly unrelated worlds, of which, however, each determines the same sensations. All that determination of a sensible occurrence which can be the object of possible experience or inferred as an explanation of experience—its simple position of antecedence or sequence in time to other occurrences as well as its relation to conditions which regulate that position and determine its sensible nature—will belong to one world of which a unifying self-consciousness is the organising principle: while the very same occurrence, as an effect of things-in-themselves, will belong to another world, will be subject to a wholly different order of determinations, which may have—and indeed, in being so described, is assumed to have—some principle of unity of its own, but of which, because it is a world of things-in-themselves, the principle must be taken to be the pure negation of that which determines the world of experience. If this be so, the conception of a universe is a delusive one. Man weaves a web of his own and calls it a universe, but if the principle of this universe is neither one with, nor dependent on, that of things-in-themselves, there is in truth no universe at all, nor does there seem to be any reason why there should not be any number of such independent creations. We have asserted the unity of the world of our experience only to transfer that world to a larger chaos.

A tempting but misleading way out of the difficulty is to reduce the world of experience to dependence on that of things-

in-themselves by taking the intellectual principle, which, in the sense explained, 'makes' the world of experience, to be not, as Kant considered it, an independent thing-in-itself, but itself a product of things-in-themselves. Our readiness to confuse things-in-themselves, as just pointed out, with the material conditions of sensation, may easily bring us to put the case in this way to ourselves. Certain combinations of moving matter, we are ready to believe, by processes yet to be ascertained, issue in those living organisms which again, in reaction upon certain modes of motion, yield sensation: and the sensitive subject, under a continuance of like physical influences, somehow grows into the intellectual subject of which the action is admitted to be necessary to constitute the 'cosmos of our experience'.¹ But we have learned Kant's lesson to very little purpose if we do not understand that the terms, which in such psychogenesis are taken to stand for independent agents, are in fact names for substantiated relations between phenomena: relations to which an existence on their own account is fictitiously ascribed, but which in truth only exist for, or through the action of, the unifying and self-distinguishing spiritual subject which they are taken to account for. If this subject is to be dependent on things-in-themselves, something else must be understood by these 'things' than any subjects that we know or can know, for in the existence of such objects its action is already implied. The question then arises whether, when we have excluded from things-in-themselves every kind of qualification arising from determination by, or relation to, an intelligent subject, any meaning is left in the assertion of a dependence of this subject upon them. Does not any significant assertion of that dependence, either as a fact or even as a mere possibility, imply a removal of the things-in-themselves from the region of the purely unknowable and their qualification by an understood relation to the intelligent subject said to be dependent on them? But if this is so, and if it is impossible for such a relation, any more than any other, to exist except through the unifying action of spirit, what becomes of the independence of the things-in-themselves? Are they not being determined by a spiritual action exactly of that kind which is being alleged to depend on them, and their exclusion of which is the one point expressed by their designation as things-in-themselves?

These considerations seem to preclude us, when once we have recognised the ground of distinction between a world of experience and a world of things-in-themselves, from any attempt to overcome that absolute separation between the two worlds, which Kant's doctrine implies, by treating the organising subject of

¹ I borrow the phrase from Mr. G. H. Lewes.

the world of experience as in any sense a product of things-in-themselves. Kant himself lends no countenance to any such attempt: but on further reflection we may begin to question whether the view, which Kant himself gives, of the relation between things-in-themselves and the 'matter' of experience, or '*natura materialiter spectata*'—the view out of which the whole difficulty arises—is not itself open to the same charge of inconsistency as that method of escape from its consequences which we have examined. When we say that sensations, or phenomena in respect of their mere 'matter,' are effects of things-in-themselves, we may exclude as carefully as possible all confusion of the things-in-themselves with the ascertainable material conditions, or formal causes, of feeling, but we cannot assert such a relation of cause and effect between the things and sensation without making the former a member of a relation which, as Kant himself on occasion would be ready to remind us, we have no warrant for extending beyond the world of experience, or for considering as independent of the intellectual principle of unity which is the condition of there being such a world. Causation has no meaning except as an unalterable connexion between changes in the world of our experience—an unalterableness of which the basis is the relation of that world throughout, with all its changes, to a single subject. That sensations therefore, the matter of our experience, should be connected as effects with things-in-themselves, of which all that can be said is that they belong to a world other than the world of our experience and are not relative to the subject to which it is relative, is a statement self-contradictory or at best unmeaning.

That Kant should not have seen this merely goes to show that his own doctrine, being the gradual conquest of his later years, had not obtained full possession of his mind. The antithesis between the real and the work of thought had still such command over him that, after he had himself traced the agency of thought in all that gives the world of experience a definite character, he still could not help ascribing to this world, in terms of the knowable, a relation to an unknowable opposite; though that very relation, if it existed, would according to his own showing bring the unknowable opposite within that world dependent on an intelligent subject from which it is expressly excluded.

At this point we may probably anticipate a rejoinder to some such effect as the following. It appears to be impossible to take the matter of experience to be the effect of things-in-themselves, since these things, if they are to be things-in-themselves, cannot be supposed to exist in a relation which only holds for the world of experience, as determined by an intelligent subject. But it must be equally impossible to consider it a product of

the intelligent subject, to which, when we have allowed every function that can be claimed for it in the way of uniting in a related system the manifold material of sensation, we must still deny the function of generating that material. Yet we cannot ignore sensation. We cannot reduce the world of experience to a web of relations in which nothing is related, as it would be if everything were erased from it which we cannot refer to the action of a combining intelligence. After all our protests against Dualism, then, are we not at last left with an unaccountable residuum—an essential element of the real world of experience, which we cannot trace to what we regard as the organising principle of that world, but which is as necessary to make the world what it is as that principle itself? What do we gain by excluding other ways of accounting for it, if it is finally irreducible to the only agency by which we can explain the order of the world? Does it not remain a thing-in-itself, alien and opposite to anything that we can explain as the construction of intelligence, just as much as if it were admitted to be the product of an unknowable power?

The best hope of answering these questions lies in considering further how they arise. They are due to the abstraction of the 'matter' from the 'form' of experience. This abstraction we inevitably make in reflecting on the process by which we obtain such knowledge as we have, but it deceives us when we make it a ground for supposing a like separation of elements in the world of experience. It is true indeed, according to the doctrine previously stated, that the principle which enables us to know that there is a world, and to set about learning its nature, is identical with that which is the condition of there being a world; but it is not therefore to be imagined that all the distinctions and relations, which we present to ourselves—and necessarily present to ourselves—in the process of learning to know, have counterparts in the real world. Our presentation of them, as a part of our mental history, is a fact definitely related and conditioned in the reality of the world: but the distinctions presented may exist only for us, in whom the intellectual principle realises itself under special conditions, not in the world as it is in itself or for a perfect intelligence. The distinction between the form and matter of experience is a distinction of this kind. In reflecting on the process by which we have come to know anything we find that, at any stage we may recall, it consists in a further qualification of a given material by the consideration of the material under relations hitherto unconsidered. Thus as contrasted with, and abstracted from, the further formation which upon continued observation and attention it may acquire, any perception, any piece of knowledge, may be regarded as an unformed matter. On the other hand,

when we look at what the given perception or piece of knowledge is in itself, we find that it is already formed, in more complex ways than we can disentangle, by the synthesis of less determinate data. But there is a point at which the individual's retrospective analysis of the knowledge which he finds himself to possess necessarily stops. Antecedently to any of the formative intellectual processes which he can trace, it would seem that something must have been given for those processes to begin upon. This something is taken to be feeling, pure and simple. When all accretions of form, due to the intellectual establishment of relations, have been stripped off, there seem to remain the mere sensations without which the intellectual activity would have had nothing to deal with or operate upon. These then must be in an absolute sense the matter—the matter excluding all form—of experience.

Now it is evident that the ground on which we make this statement, that mere sensations form the matter of experience, only warrants us in making it, if at all, as a statement in regard to the mental history of the individual. Even in this reference it can scarcely be accepted. There is no positive basis for it but the fact that, so far as memory goes, we always find ourselves manipulating some data of consciousness, themselves independent of any intellectual manipulation which we can remember applying to them. But on the strength of this to assume that there are such data in the history of our experience, consisting in mere sensations, antecedently to any action of the intellect, is not really an intelligible inference from the fact stated. It is an abstraction which may be put into words, but to which no real meaning can be attached. For a sensation can only form an object of experience in being determined by an intelligent subject which distinguishes it from itself and contemplates it in relation to other sensations: so that to suppose a primary datum or matter of the individual's experience, wholly void of intellectual determination, is to suppose such experience to begin with what could not belong to or be an object of experience at all. But the question we are here concerned with is not whether any such thing as mere sensation, a matter wholly unformed by intelligence, exists as a stage in the process by which the individual becomes acquainted with the world; it is the question whether there is any such element in the world of knowable facts. Has nature—the system of connected phenomena or facts related to consciousness which forms the object of experience—a reality of that kind which Kant describes as '*natura materialiter spectata*'; a reality consisting of mere sensations, or sensations of which the qualities, whatever they may be, are independent of such determination as arises from the action of a unifying and self-distinguishing subject?

Or has it in any other sense a 'matter' which does not depend on a combining intelligence for being what it is, as much as does the relation between my experience of to-day and that of my previous life?

Phenomena are facts related to consciousness. Thus, when we inquire whether there is such a thing in the world of phenomena, as sensation undetermined by thought, the question may be considered in relation either to the facts, as such, or to the consciousness for which the facts exist. It may be put either thus—Among the facts that form the object of possible experience, are there sensations which do not depend on thought for being what they are? or thus—Is sensation, as unqualified by thought, an element in the consciousness which is necessary to there being such a thing as the world of phenomena?

After what has been already said, the answer to these questions need not detain us long. If it is admitted that we know of no other medium but a thinking or self-distinguishing consciousness in and through which that unification of the manifold can take place which is necessary to constitute relation, it follows that a sensation apart from thought—not determined or acted on by thought—would be an unrelated sensation, and an unrelated sensation cannot amount to a fact. Mere sensation is in truth a phrase that represents no reality. It is the result of a process of abstraction, but having got the phrase we give a confused meaning to it—we fill up the shell which our abstraction has left—by reintroducing the qualification which we assumed ourselves to have got rid of. We present the *mere* sensations to ourselves as determined by relation in a way that would be impossible in the absence of that connecting action which we assume to be absent in designating them *mere* sensations. The minimum of qualification, which we mentally ascribe to the sensation in thus speaking of it, is generally such as implies sequence and degree. A feeling not characterised either by its connexion with previous feeling or by its own intensity we must admit to be nothing at all, but at first sight we take it for granted that the character thus given to a feeling would belong to it just the same though there were no such thing as thought in the world. It certainly does not depend on ourselves—on any power which we can suppose it rests with our will to exert or withhold—whether sensations shall occur to us in this or that order of succession, with this or that degree of intensity. But the question is whether the relation of time between one sensation and another, or that relation between a sensation and other possible modes of itself which is implied in its having a degree, could exist if there were not a subject for which the several sensations, or modes of the same sensa-

tion, were equally present and equally distinguished from itself. If it is granted that these relations, which constitute the minimum determination of a sensible fact, only exist through the action of such a subject, it follows that thought is the necessary condition of the existence of sensible facts, and that *mere* sensation, in the sense supposed, is not a possible constituent in the realm of facts. Or, if the consequence be disputed, the dispute can only turn on a secondary question as to the fitness of the term 'thought' to represent a function of which the essential nature is admitted. If by thought is necessarily understood a faculty which is born and dies with each man; which is exhausted by labour and refreshed by repose; which is exhibited in the construction of chains of reasoning but not in the common ideas which make mankind and its experience one; on which the 'great thinker' may plume himself as the athlete on the strength of his muscles; then to say that the agency, which makes sensible facts what they are, can only be that of a thinking subject, is an absurd impropriety. But if it appears that a function in the way of self-consciousness is implied in the existence of relations, and therefore of determinate facts—a function identical in principle with that which enables the individual to look before and after, and which renders his experience a connected system—then it is more reasonable to modify some of our habitual notions of thought as exercised by ourselves than, on the strength of these notions, to refuse to recognise an essential identity between the subject which forms the unifying principle of the experienced world and that which, as in us, qualifies us for an experience of it. It becomes time to consider whether the characteristics of thought, even as exercised by us, are not rather to be sought in the unity of its object as presented to all men and in the continuity of all experience in regard to that object, than in the incidents of an individual life which is but for a day, or in abilities of which any man can boast that he has more than his neighbour.

Our question, then, in the first of the two forms suggested, must be answered in the negative. A fact consisting of *mere* feeling, in the sense supposed, is a contradiction, an impossibility. This does not of course mean that no being can feel which does not also think. We are not called on here to inquire whether there are really animals which feel but have not the capacity of thinking. All that the present argument would lead us to maintain would be that, so far as they feel without thinking, their feelings are not facts for them—for their consciousness. Their feelings *are* facts, but they are facts only so far as determined by relations, which exist only for a

thinking consciousness and otherwise could not exist. And in like manner that large part of our own sensitive life, which goes on without being affected by conceptions, is a series of facts with the determination of which, indeed, thought, as ours or in us, has nothing to do, but which not the less depends for its existence as a series of facts on the action of the same subject which, in another mode of its action, enables us to know them. But in saying this, it may be objected, we have already admitted that there is such a thing as a merely feeling consciousness: and, in the presence of this admission, what becomes of the denial to feeling of any separate or independent reality? The answer is that the distinction of the merely feeling consciousness is just this, that what it is really it is not consciously—that the relations by which it is really determined do not exist for it but for the thinking consciousness on which it and they alike depend for being what they are. Its very characteristics as a merely feeling consciousness depend on conditions in the universe of things by which it would not be conditioned if it were really no more than it feels itself to be; if it were not relative to, and had not its existence for, another form of consciousness which comprehends it and its conditions.

In the second of the forms in which the question before us admits of being presented—Can sensation exist as an independent element in a consciousness to which facts can appear?—it has been virtually answered in being answered in the first. To that thinking subject, whose action is the universal bond of relation that renders facts what they are, their existence and their appearance must be one and the same. Their appearance, their presence, to it is their existence. Feeling can no more be an independent element in that subject as the subject to which they appear than it can be an independent element in it as the subject through whose action they exist. It is true on the one hand, as has just been admitted, that in a great part of our lives we feel without thinking and without any qualification of our feelings by our thoughts; while yet, on the other hand, we are subjects to whom facts can appear, who are capable of conceiving a world of phenomena. But just so far as we feel without thinking, no world of phenomena exists for us. The suspension of thought in us means also the suspension of fact or reality for us. We do not cease to be facts, but facts cease to exist for our consciousness. However then we may explain the merely temporary and interrupted character of the action of thought upon feeling in us, that temporary character affords no reason why we should hesitate to deny that feeling unqualified by thought can be an element in the consciousness which is necessary to there being such a thing as a world of phenomena.

Mere feeling, then, as a matter unformed by thought, has no place in the world of facts, in the cosmos of possible experience. Any obstacle which it seemed to present to a monistic view of that world may be allowed to disappear. We may give up the assumption that it needs to be accounted for as a product of things-in-themselves; or that, if not accounted for in this way, it still remains an unaccountable opposite to thought and its work. Feeling and thought are inseparable and mutually dependent in the consciousness for which the world of experience exists, inseparable and mutually dependent in the constitution of the facts which form the object of that consciousness. Each in its full reality includes the other. It is one and the same living world of experience which, considered as the manifold object presented by a self-distinguishing subject to itself, may be called Feeling, and, considered as the subject presenting such an object to itself, may be called Thought. Neither is the product of the other. It is only when by a process of abstraction we have reduced either to something which is not itself that we can treat either as the product of anything, or apply the category of cause and effect to it at all. For that category is itself their product. Or rather, it represents one form of the activity of the consciousness which in inseparable union they constitute. The connexion between a phenomenon and its conditions is one that only obtains in and for that consciousness. No such connexion can obtain between that consciousness and anything else; which means that the consciousness itself, whether considered as feeling or considered as thought, being that by means of which everything is accounted for, does not in turn admit of being accounted for, in the sense that any 'whence' or 'why' can be assigned for it. Any constituent of the world of possible experience we can account for by exhibiting its relation to other constituents of the same world, but this is not to account for the world itself. We may and do explore the conditions under which a sentient organism is formed, and the various forms of molecular action by which particular sensations on the part of such an organism are elicited. We may ascertain uniformities in the sequence of one feeling upon another. In the life of the individual and the race we may trace regular histories of the manner in which a particular way of thinking has been affected by an earlier, and has in turn affected a later way; of the determination of certain ideas by certain emotions, and of certain emotions by certain ideas. But in all this we are connecting phenomena with phenomena within a world, not connecting the world of phenomena with anything other than itself. We are doing nothing to account for the all-uniting consciousness which alone can render these

sequences and connexions possible, for which alone they exist, and of which the action in us alone enables us to know them. We can indeed show the contradictions involved in supposing a world of phenomena to exist otherwise than in and for consciousness, and upon analysis can discern what must be the formal characteristic of a consciousness for which a system of related phenomena exists. So far we can give an account of what the world as a whole must be, and of what the spirit that constitutes it does. But just because all that we can experience is included in this one world, and all our inferences and explanations relate only to its details, neither it as a whole, nor the one consciousness which constitutes it, can be accounted for in the ordinary sense of the word. They cannot be accounted for by what they include, and being all-inclusive—at any rate so far as possible experience goes—there remains nothing else by which they can be accounted for. And this is equally true of consciousness as feeling and of consciousness as thought, for each in its reality involves the other.

We are now in a position to reconsider the restriction which Kant puts on the interpretation of his own dictum that 'understanding makes nature'. This with him means that understanding, as the unifying principle which is the source of relations, acts formatively upon feelings as upon a material given to it from an opposite source called 'things-in-themselves,' rendering them into one system of phenomena called 'nature,' which is the sole object of experience and to which all judgments as to matters of fact relate. We demur to the independent reality, or reality as determined by something else than thought, which is thus ascribed to feeling. It is not that we would claim any larger function for thought than Kant claims for understanding as separate from feeling, supposing that separation to be once admitted. It is the separation itself that is in question. We do not dispute the validity of Locke's challenge to a man by any amount of thinking to produce a single 'simple idea' to himself. We admit that mere thought can no more produce the facts of feeling, than mere feeling can generate thought. But we deny that there is really such a thing as 'mere feeling' or 'mere thought'. We hold that these phrases represent abstractions to which no reality corresponds either in the facts of the world or in the consciousness to which those facts are relative. We can attach no meaning to 'reality,' as applied to the world of phenomena, but that of existence under definite and unalterable relations, and we find that it is only for a thinking consciousness that such relations can subsist. Reality of feeling, abstracted from thought, is abstracted from the condition of its being a reality. That great part of our

sensitive life is not determined by *our* thought, that the sensitive life of innumerable beings is wholly undetermined by any thought of theirs or in them, is not in dispute: but this proves nothing as to what that sensitive life really is in nature or in the cosmos of possible experience. It has no place in nature except as determined by relations which can only exist for a thinking consciousness. For the consciousness which constitutes reality and makes the world one it exists, not in that separateness which belongs to it as an attribute of beings that think only at times or not at all, but as conditioned by a whole which thought in turn conditions. As to what that consciousness in itself or in its completeness is, we can only make negative statements. *That* there is such a consciousness is implied in the existence of the world; but *what* it is we only know through its so far acting in us as to enable us, however partially and interruptedly, to have knowledge of a world or an intelligent experience. In such knowledge or experience there is no mere thought or mere feeling. No feeling enters into it except as qualifying, and qualified by, an interrelated order of which a self-distinguishing subject forms the unifying bond. Thought has no function in it except as constantly co-ordinating ever new appearances in virtue of their presence to that one subject. And we are warranted in holding that, as a mutual independence of thought and feeling has no place in any consciousness on our part, which is capable of apprehending a world or for which a world exists, so it has none in the world-consciousness of which ours is a limited mode.

The purpose of this long discussion has been to arrive at some conclusion in regard to the relation between man and nature—a conclusion which must be arrived at before we can be sure that any theory of ethics, in the distinctive sense of the term, is other than wasted labour. If by nature we mean the object of possible experience, the connected order of knowable facts or phenomena—and this is what our men of science mean by it when they trace the natural genesis of human character—then nature implies something other than itself as the condition of its being what it is. Of that something else we are entitled to say positively that it is a self-distinguishing consciousness, because the function which it must fulfil in order to render the relations of phenomena, and with them nature, possible is one which, on however limited a scale, we ourselves exercise in the acquisition of experience, and exercise only by means of such a consciousness. We are further entitled to say of it, negatively, that the relations by which, through its action, phenomena are determined are not relations *of* it—not relations by which it is itself determined. They arise out of its presence to phenomena,

or the presence of phenomena to it, but the very condition of their thus arising is that the unifying consciousness which constitutes them should not itself be one of the objects so related. The relation of events to each other as in time implies their equal presence to a subject which is not in time. There could be no such thing as time if there were not a self-consciousness which is not in time. As little could there be a relation of objects as outside each other, or in space, if they were not equally related to a subject which they are not outside; a subject of which outsideness to anything is not a possible attribute; which by its synthetic action constitutes that relation but is not itself determined by it. The same is true of those relations which we are apt to treat as independent entities under the names matter and motion. They are relations existing for a consciousness which they do not so condition as that it should itself either move or be material.

If objection is taken to the interpretation of matter as consisting in certain relations, if its character as substance is insisted on, it remains to ask what is meant by substance. It is not denied that there are material substances, but their qualification both as substances and as material will be found to depend on relations. By a substance we mean that which is persistent throughout certain appearances. It represents that identical element throughout the appearances, that permanent element throughout the times of their appearance, in virtue of which they are not merely so many different appearances, but connected changes. A material substance is that which remains the same with itself in respect of some of the qualities which we include in our definition of matter—qualities all consisting in some kind of relation—while in other respects it changes. Its character as a substance depends on that relation of appearances to each other in a single order which renders them changes. It is not that first there is a substance and that then certain changes of it ensue. The substance is the implication of the changes, and has no existence otherwise. Apart from the changes no substance, any more than apart from effects a cause. If we choose to say then that matter exists as a substance, we merely substitute for the designation of it as consisting in relations a designation of it as a certain correlatum of a certain kind of relation. Its existence as a substance depends on the action of the same self-consciousness upon which the connexion of phenomena by means of that relation depends. And the subject, of which the action is implied in the connexion of phenomena in one system of nature by means of this correlatum of change, is one that can itself be as little identified with that correlatum—with any kind of substance—as with the change to

which substance is relative. It has already been pointed out that a consciousness, to which events are to appear as changes, cannot itself consist in those events. Its self-distinction from them all is necessary to its holding them all together as related to each other in the way of change. And for the same reason that connexion of all phenomena as changes of one world, which is implied in the unity of intelligent experience, cannot be the work of anything which is the substance qualified by those changes. Its self-distinction from them, which is the condition of their appearance to it under this relation of change, is incompatible with its being so qualified. Even if we allow it to be possible that a subject, which connects certain appearances as changes, should itself be qualified by—should be the substance persistent in—certain other changes, it is plainly impossible that a subject which so connects all the appearances of nature should be related in the way of substance to any or all of them.

We may express the conclusion to which we are thus brought by saying that nature in its reality, or in order to be what it is, implies a principle which is not natural. By calling the principle not natural we mean that it is neither included among the phenomena which through its presence to them form a nature, nor consists in their series, nor is itself determined by any of the relations which it constitutes among them. In saying more than this of it we must be careful not to fall into confusion. We are most safe in calling it spiritual because, for reasons given, we are warranted in thinking of it as a self-distinguishing consciousness. In calling it supernatural we run the risk of misleading and being misled, for we suggest a relation between it and nature of a kind which has really no place except *within* nature, as a relation of phenomenon to phenomenon. We convey the notion that it is above or beyond or before nature, that it is a cause of which nature is the effect, a substance of which the changing modes constitute nature; while in truth all the relations so expressed are relations which, indeed, but for the non-natural self-conscious subject would not exist, but which are not predicable of it. If we employ language about it in which, strictly taken, they are implied, it must only be on a clear understanding of its metaphorical character. On the other hand, there is no imperative reason why we should limit 'nature' to the restricted sense in which we have been supposing it to be used, if only the same sense can be covered by another term. If we like, we may employ the term 'nature' to represent the one whole which includes both the system of related phenomena and the principle, other than itself, which that system implies. But in that case, if we would avoid confusion,

we must find some other term than nature to represent the system of phenomena as such, or as considered without inclusion of the spiritual principle which it implies, and some other term than 'natural' to represent that which this system contains. We are pretty sure, however, to fail in this, and 'nature' in consequence becomes a term that is played fast and loose with in philosophical writing. It is spoken of as an independent agent: a certain completeness and self-containedness are ascribed to it: and to this there is no objection so long as we understand it to include the spiritual principle, neither in time nor in space, immaterial and immovable, eternally one with itself, which is necessary to the possibility of a world of phenomena. But it is otherwise if 'nature' is at the same time thought of, as it almost inevitably is, under attributes only applicable to the world of phenomena, and thus as excluding the spiritual principle which that world indeed implies but implies as other than itself. In that case, to ascribe independence or self-containedness to it—if for a moment the use of theological language may be allowed which it is generally desirable to avoid—is to deify nature while we cancel its title to deification. It is to speak of nature without God in a manner only appropriate to nature as it is in God. Or—to employ language less liable to misleading associations—it is to involve ourselves in perpetual confusion by seeking for a completeness in the world of phenomena, the world existing under conditions of space and time, which just because it exists under those conditions is not to be found there. The result of the confusion will generally be that, being unable to discover any perfection or totality or independent agency among the matters of fact which we know, and having ignored the implication by those facts of a spiritual principle other than themselves, we come to assume that no perfect or self-determined being exists at all or at any rate in any relation to us.

This brings us to the question which lies at the root of ethical inquiry. In what relation do we ourselves stand to the one self-distinguishing subject other than nature, which we find to be implied in nature? To a certain extent an answer to this question has been involved in the considerations which have led to the conviction of there being such a subject. That if we were merely phenomena among phenomena we could not have knowledge of a world of phenomena appears from analysis of the conditions of an intelligent experience. Our experience, we have seen, has two characteristics, of which neither admits of being reduced to or explained by the other. On the one hand it is an order of events in time, consisting in modifications of our sensibility. On the other hand it is a consciousness of those

events—a consciousness of them as a related series, and as determined in their relations to each other by relation to something else, which is from the first conceived as other than the modifications of our sensibility, and which with growing knowledge comes to be conceived as involving relations between objects that are not events at all and between events that preceded or lie beyond the range of sentient life. But, as has been further pointed out, a consciousness of related events, as related, cannot consist in those events. The modifications of our sensibility cannot, as successive events, make up our consciousness of them. *Within* the consciousness that they are related in the way of before and after there is no before and after. There is no such relation between components of the consciousness as there is between the events of which it is the consciousness. They form a process in time. If it were a process in time, it would not be a consciousness of them as forming such a process.

Thus that man is not merely a phenomenon or succession of phenomena, that he does not consist in a series of natural events, is implied in the fact that phenomena appear to him as they do, that for him or for his consciousness there is such a thing as nature. There are certain current phrases of modern psychology, which no doubt have their warrant in facts to be considered presently, but which, as commonly used, are apt to blind us to this essential characteristic of the position in which we stand towards the world we know. We use the term “phenomena of consciousness” as if it covered the whole range of knowledge and morality—all our thought about the world, all our perceptions and conceptions of objects, all the ideas which we seek to realise in action. We speak of consciousness universally, without qualification or distinction, as a succession of states: and the figure of the stream is the accepted one for expressing the nature of our spiritual life. Now it would be idle to deny that there is an appropriateness in a way of speaking which none of us can avoid, but it is important to call attention to that kind of activity undoubtedly exercised by us, implied in all distinctively intelligent or moral experience, to which it is wholly inappropriate. If we reflect on what is contained in our knowledge, or in any conception or perception contributory to it, we shall see that the relation in which its constituents stand to each other is essentially different from the relation between stages of the process by which the knowledge or perception is arrived at. The figure of the stream may be applicable to the latter, though the more we think of it the less we shall find it so, but it is quite inapplicable to the former. Successive states of consciousness may be represented as waves of which one is for ever taking the place of the other, but such successive states

cannot make a knowledge even of the most elementary sort. Knowledge is of related facts, and it is essential to every act of knowledge that the related facts should be present together in consciousness. Between the apprehensions of those facts, so far as they make up a certain piece of knowledge, there is no succession. I may have apprehended some of them, no doubt, before I apprehend the rest; or, after having apprehended the latter, my consciousness may lose its hold on some apprehended before. In this sense different states of knowledge succeed each other in the individual, but not so the manifold constituents of that which in any act of knowledge is present to his mind as the object known; not so the determinations of consciousness in which those constituents are presented and which make up the complex act of knowledge. For a known object, as known, is a related whole, of which, as of every such whole, the members are necessarily present together; and the acts of consciousness in which the several members are apprehended, as forming a knowledge, are a many in one. None is before or after another. This is equally the case whether the knowledge is of successive events or of the 'uniformities' which are said to constitute a law of nature. For, as we have previously had occasion to point out, between the constituents of a knowledge of succession there can be no succession: so long as certain events are *contemplated* as successive, no one of them is an object to consciousness before or after another.

For this reason no knowledge, nor any mental act involved in knowledge, can properly be called a 'phenomenon of consciousness'. It may be *of* phenomena; if the knowledge is of events, it is so. The attainment of the knowledge, again, as an occurrence in the individual's history, a transition from one state of consciousness to another, may properly be called a phenomenon; but not so the consciousness itself of relations or related facts—not so the relations and related facts present to consciousness—in which the knowledge consists. For a phenomenon is a sensible event, related in the way of antecedence and consequence to other sensible events, but the consciousness which constitutes a knowledge or—if we may be allowed the use of a word which, though unfamiliar in this connexion, avoids some ambiguity—the content of such consciousness is not an event so related nor made up of such events. We cannot point to any other events, as we can in the case of a phenomenon proper, from antecedence or consequence to which it takes its character as an event. As an instance, let us take a man's knowledge of a proposition in Euclid. This means a relation in his consciousness between certain parts of a figure, determined by the relation of those parts to other parts.

The knowledge is made up of those relations as in consciousness. Now it is obvious that there is no lapse of time, however minute, no antecedence or consequence, between the constituent relations of the consciousness so composed, or between the complex formed by them and anything else. To call such knowing consciousness a phenomenon, in the ordinary meaning of a sensible event, is a confusion between it and the process of arriving at or losing it. That in the learning or forgetting a proposition of Euclid, as in the acquisition or loss of any other piece of knowledge, a series of events takes place, is plain enough; and such events may legitimately be called 'phenomena of consciousness'. But it must be noticed that when these events of the mental history come to be reviewed in intelligent memory or experience—when we know them as the connected facts of a history—their existence as in consciousness is no longer that of events. They do not succeed each other in time, but are present in the unity of relation, as much as are the parts of a geometrical figure which has been apprehended by, or taken into, an intelligent consciousness.

The discrepancy here pointed out, between the reality of consciousness as exhibited in knowledge and anything that can properly be called phenomena or successive states of consciousness, would be more generally acknowledged but for two reasons. One of these is the ambiguity attending all our terms expressive of mental activity—knowledge, conception, perception, &c.—which may denote events in our mental history, the passing into certain states of consciousness, as well as that of which in those states we are conscious—the content and object of consciousness. At the same time—and this is the second of the reasons referred to—this content or object is looked upon as existing quite otherwise than in or for consciousness; as independent of it, though from time to time affecting it in a certain way and producing a certain state of consciousness. Hence it is only the successive changes in our apprehensive attitude towards the objects of our knowledge and experience that are commonly put to the account of consciousness. Its nature is not taken to be exhibited in the structure of those objects any more than it would be if, instead of being objects known and experienced, they were 'things-in-themselves'. By perception is understood a modification of our sensibility in which some present external object is revealed to us. Conception we regard equally as an *occurrence* in consciousness, and though we suppose it to take place in the absence of any object at the time affecting the senses, we practically separate in our thoughts the conceived content or object from the conception, and imagine it vaguely as residing elsewhere than in consciousness. We thus avoid

the necessity of facing the question how an object determined by relations can have its being in a consciousness which consists of a series of occurrences. Even 'knowledge,' though we often mean by it a system of known facts or laws, is apt to lose this sense when we speak of it as a form of consciousness. It then becomes merely the mental event of arriving at an apprehension of related facts. It does not represent the relation of the facts in consciousness. That there must be such a relation of them in consciousness and that a consciousness, consisting of events cannot contain such a relation, is a conclusion which we avoid by eviscerating knowledge of its content and transferring this content from consciousness to "external things".

Even those who recognise the difficulty of extruding the object conceived or known—an object constituted by relations—from the consciousness which conceives or knows, and in consequence of describing conception and knowledge as mental events or phenomena, will be apt to ignore the same difficulty in regard to perception. The externality of the perceived object to consciousness seems to be taken for granted even by those who would be quite ready to tell us that the 'things' which we talk of conceiving are but 'nominal essences'. This arises from the connexion of perception with sensation and from the real explicability of sensation by external impact. It is admitted on all hands that there can be no perception without (in Locke's phraseology) 'actual present sensation'. The difference between a perception of the moon and any mere conception of it is that, when it is perceived, although it is only in virtue of some conception of relations that it is perceived as a qualified object, there is necessarily some present sensation which those relations are conceived as determining. From this necessary presence of sensation in the act of perception, there easily arises a confusion between the perceived object and the exciting cause of sensation, which again leads to an extrusion of the perceived object from the consciousness in which perception consists, and to the view of it as an external something to which perception is related as an occurrence to its cause. A little reflection, however, will show us that the exciting cause—the stimulant—of the sensation involved in a perception is never the object perceived in a perception. It is necessary to a perception of colour that there should be a sensation arising out of a stimulus of the optic nerve by a particular vibration of ether. That vibration, however—the external exciting cause of the sensation—is not the object perceived in the perception of the colour. That object, indeed, will not be the same for every percipient. It will vary according to the extent of his knowledge and to the degree of attention aroused in him in the

particular case. The perception may be no more than consciousness of the fact that a particular colour is presented to him—a fact to be aware of which is already to be aware of a certain rudimentary relation—or it may be a consciousness of various relations by which this fact is determined. And the relations thus apprehended in the perception may vary again from those by which the colour is connected with accompanying appearances in superficial experience to those less obvious ones which science has ascertained. It may thus come to include a knowledge that the sensation of light arises out of a certain relation between vibrations of ether and the optic nerve. If the perception is that of a man of science observing light or colour for scientific purposes, it probably does so. Such knowledge is present to his mind in the perception. But it is a mere confusion to imagine that in this or any other form of such a perception the vibration of ether enters into the object perceived—into the content of the perception—in the same sense in which it acts as the exciting cause of the sensation, or to suppose that this object or content is external to the percipient consciousness as the stimulant matter is to the sentient organism. The sentient organism to which the vibratory ether may be considered external is not consciousness, either as exercised in perception or in any other way, any more than the vibratory ether, as external, is the object perceived. Strictly speaking, it is not a vibratory ether but the fact consisting in the relation between this and the optic nerve—this fact as existing for consciousness—that enters into or determines the perceived object as the scientific man perceives it. This fact, as forming part of the content of the perception, is wholly within consciousness: or, to speak more accurately, the opposition of without and within has no sort of application to it. A *within* implies a *without*, and we are not entitled to say that anything is without or outside consciousness, for externality, being a relation which, like any other relation, exists only in the medium of consciousness—only between certain objects as they are for consciousness—cannot be a relation between consciousness and anything else. An affection of the sentient organism by matter external to it is the condition of our experiencing the sort of consciousness called perception; a relation of externality between objects is often part of that which is perceived; but in no case is there such a relation, any more than a relation of before and after, between the object perceived and the consciousness of it, or between constituents of that consciousness.

If having got rid of the confusion between the stimulant of sensation and the perceived object, we examine the constituents of any perceived object—not as a ‘thing-in-itself,’ or as we

may vainly try to imagine it to be apart from our perception, but as it actually is perceived—we shall find alike that it is only for consciousness that they can exist, and that the consciousness for which they thus exist cannot be merely a series of phenomena or a succession of states. For a justification of this statement we may appeal to the account given of perception by the accepted representatives of empirical psychology. “Our perception of an animal or a flower,” says Mr. Lewes, “is the synthesis of all the sensations we have had of the object in relation to our several senses.”¹ This object itself, he tells us, is a “group of sensibles,” which corresponds with Mr. Mill’s account of it as a combination of “permanent possibilities of sensation”. Such language is no doubt susceptible of a double interpretation, and it is only upon one of the two possible interpretations that it justifies the conclusion we shall draw from it. It is true also that this interpretation is not sanctioned by the writers mentioned, who seem not to distinguish the two interpretations, and avail themselves sometimes of the one, sometimes of the other. It is the only interpretation of the definition, however, that is really suitable to it as a definition of Perception.

What exactly is it that is combined in the synthesis spoken of? Is it a synthesis of feelings as caused by the action of external irritants on the nervous system, or is it a synthesis of known and remembered facts that such feelings have occurred under certain conditions and relations? The two kinds of synthesis are perfectly distinct, and though the former may be presupposed in perception, it is the latter alone which constitutes it in the distinctive sense. It is true no doubt that an excitement of sensation by some present irritant may revive in a fainter degree feelings that have been previously associated with this sensation. But such a revival does not constitute a perception. It cannot result in a synthesis of the feelings as *feelings of an object*, or in the apprehension of a sensible fact recognised as a symbol of many other related facts of which there would be experience if certain conditions on the part of a sentient subject were fulfilled; in other words, as a symbol of possibilities of sensation. If it were only thus that past feelings are reinstated, they could not properly be said to be combined in an object or in consciousness of an object at all, nor would their reinstatement be in any sense an inference, such as Mr. Lewes rightly holds to be involved in all perception.² They could only be combined either in the way of producing and giving place to a further feeling, as little a consciousness of fact or object as any

¹ *Problems of Life and Mind*, I., 191.

² *Ibid.*, I. 257.

of them, or in the sense that their effects are accumulated in the nervous organism so as to modify its reactions upon stimulus. Anything more than this—any combination of the data of feeling as qualities of an object, or as facts related to a certain sensation which the recurrence of that sensation may recall to us—implies the action of a subject which thinks of its feelings, which distinguishes them from itself and can thus present them to itself as facts. Such action is as necessary to the original presentation of all that is recalled in perception as to the incorporation of what is recalled in the total fact perceived. As we have seen, no feeling as such or as merely felt enters into the perceived object—not even the present sensation which is admitted to be a necessary condition of perception. It is not the sensation, but the fact presented by the self-distinguishing subject to itself that such a sensation is here and now occurring—occurring under certain relations to other experience—it is this that is the nucleus on which the recalled experience gathers, suggesting other possibilities of sensation, not themselves ‘actual present sensations,’ but no less present as facts than the fact that the given sensation is here and now being felt. The knowledge of such possibilities of sensation is doubtless in every case founded on actual sensation experienced in the past, but on this as on an observed fact determined by relation to other like facts through the equal presence of all to a thinking subject. Except to an intelligence which has thus observed sensations as related facts, there can be no suggestion upon the recurrence of one of them that others are possible upon certain conditions being fulfilled. The revival of the past sensations themselves with whatever intensity is no such suggestion. It may be that the excitement of sensation by an external stimulant, which is the occasion of perception, is always followed by a revival with some less intensity of the sensations known to be possible as accompaniments of the given sensation; but the knowledge of their possibility—the apprehension of the relation between their several possibilities as facts and the fact of the given sensation occurring—this, the essential thing in perception, is as different from the revival of the sensations themselves or their images as is the given sensation from the presentation of its occurrence as a fact. And on this difference depends the susceptibility of combination in a perceived object, of presentation as a many in one, which belongs to known possibilities of sensation, to known facts that certain feelings would occur under certain conditions, in distinction from feelings as felt. Manifold feelings may combine, as we have seen, in one result, but in that one result their multiplicity as feelings is lost. The constituents of a perceived

object, on the contrary, whether we consider them qualities or related facts, survive in their multiplicity at the same time that they constitute a single object. The condition of their doing so is the self-distinction of the thinking subject from the data of sensation, which it at once presents to itself in their severalty as facts and unites as *related* facts in virtue of its equal presence to them all.

It thus appears that the common objects of experience—not those ‘things in general’ which are sometimes supposed to be the object of conception, but the particular things we perceive, this flower, this apple, this dog—in the only sense in which they are objects to us or are perceived at all, have their being only for, and result from the action of, a self-distinguishing consciousness. As perceived, they consist in certain groups of facts, which again consist in possibilities of sensation, known to be related in certain ways to each other and to some given fact of sensation. The extent of the group in the case of each perception, and the particular mode in which the constituent facts are related, depend on the experience and training of the percipient, as well as on the direction of his mind at the time of the perception. In every case the relations by which the given sensation is determined in the apprehension of the percipient are but a minute part of those by which it is really determined. The object which the most practised botanist perceives in his observation of a flower is by no means adequate to the real nature of the flower. That real nature, indeed, if our previous conclusions have been true, must consist in relations of which consciousness is the medium or sustainer, though not consciousness as it is in the botanist. It is not, however, with the real nature of the flower, but with its nature as perceived—a fragment of the real nature—that we are here concerned; and it is relations of which the percipient consciousness is the sustainer, which exist only through its action, that make the object, as in each case the percipient perceives it, what it is to him. Facts related to those of which the percipient is aware in the object, but not yet known to him, can only be held to belong to the perceived object potentially or in some anticipatory sense, in so far as upon a certain development of intelligence, in a direction which it does not rest with the will of the individual to follow or no, they will become incorporated with it. But they become so incorporated with it only through the same continued action of a combining self-consciousness upon data of sensation through which this object, as the percipient already perceives it, has come to be there for him.

Common sense is apt to repel such statements as these because they are taken to imply that we can perceive what we

like; that the things we see are fictions of our own, not determined by any natural or necessary order. But in truth it implies nothing of the sort, unless it is supposed that our whole consciousness is a fiction of our own, of which it rests with ourselves to make what we please. Objects do not cease to be "objective," facts do not cease to be unalterable, because we find that a consciousness which we cannot alter or escape from, beyond which we cannot place ourselves, *for* which many things indeed are external to each other but *to* which nothing can be external, is the medium through which they exist for us, or because we can analyse in some elementary way what it must have done in order to their thus being there for us. It is not the conception of fact but the conception of the consciousness for which facts exist that is affected by such analysis. So long as consciousness is thought to have nothing to do with the constitution of the facts of which we are conscious, it is possible to look upon it merely as a succession of events or phenomena "of the inner sense". The question how these inner events or successive phenomena come to perform a synthesis of themselves into objects is not raised, because no such work of synthesis is thought to be required of consciousness at all. The objects we perceive are supposed to be there for us independently of any action of our minds: we have but passively to let their appearances follow each other over the mental mirror. While this view is retained, the succession of such appearances and of the mental reactions upon them—reactions gradually modified through accumulated effects of the appearances—may fairly be taken to constitute our spiritual being. But it is otherwise when we have recognised the truth that a sensation excited by an external irritant is not a perception of the irritant or (by itself) of anything at all: that every object we perceive is a congeries of related facts, of which the simplest component, no less than the composite whole, requires in order to its presentation the action of a principle of consciousness, not itself subject to conditions of time, upon successive appearances, such action as may hold the appearances together, without fusion, in an apprehended fact. It then becomes clear that there is a function of consciousness as exercised in the most rudimentary experience, in the simplest perception of sensible things or of the appearances of objects, which is incompatible with the definition of consciousness as any sort of succession of any sort of phenomena. Something else than a succession of phenomena is seen to be as necessary in the consciousness that perceives facts as it is necessary to the possibility of the world of facts itself.

T. H. GREEN.

(To be continued.)

II.—ON SOME HEGELISMS.

WE are just now witnessing a singular phenomenon in British and American philosophy. Hegelism, so entirely defunct on its native soil that I believe but a single young disciple of the school is to be counted among the privat-docents and younger professors of Germany, and whose older champions are all passing off the stage, has found among us so zealous and able a set of propagandists that to-day it may really be reckoned one of the most potent influences of the time in the higher walks of thought. Not only in heavier works by professors, but in magazine literature, anonymous book-reviews and the like, we cross the trail of its path. In what was lately his own *Journal of Mental Science*, we are confronted by the severest of hegelian reviews of Dr. Maudsley's book on the Mind, and if perchance we essay to do some small bit of psychological detail-work for ourselves, it is lucky if some one does not trip us up at every step by reminding us that we forget to do homage to the Transcendental Ego which is presupposed in all the words we use. Although the movement, so far as it has expressed itself in print, is critical rather than constructive, and although the transcendental-ego-business is a good deal like interrupting a geographer at his work by telling him every five minutes that he forgets to talk about Space, which is nevertheless presupposed in all the distances and latitudes and longitudes he is discussing, there can still be no doubt that, as a movement of reaction against the traditional British empiricism, the hegelian influence represents expansion and freedom, and is doing service of a certain kind.

Such service, however, ought not to make us blindly indulgent. Hegel's philosophy mingles mountain-loads of corruption with its scanty merits, and must, now that it has become quasi-official, make ready to defend itself as well as to attack others. It is with no hope of converting independent thinkers, but rather with the sole aspiration of showing some chance youthful disciple that there is another point of view in philosophy that I fire this skirmisher's shot, which may, I hope, soon be followed by somebody else's heavier musketry.

The point of view I have in mind will become clearer if I begin with a few preparatory remarks on the motives and difficulties of philosophising in general.

To show that the real order is identical with the ideal may roughly be set down as the main-spring of philosophic activity ;

not necessarily ideal in every way, but always ideal in some way. The atomic and mechanical conception of the world is as ideal from the point of view of some of our faculties as the teleological one is from the point of view of others. In the realm of every ideal we can begin anywhere and roam over the field, each term passing us to its neighbour, each member calling for the next, and our reason rejoicing in its glad activity. Where the parts of a conception seem thus to belong together by inward kinship, where the whole is defined in a way congruous with our powers of reaction, to see is to approve and to understand.

Much of the real seems at the first blush to follow a different law. The parts seem, as has been said, to be shot out of a pistol at us. Each asserts itself as a simple brute fact, uncalled for by the rest, which, so far as we can see, might even make a better system without it. Arbitrary, foreign, jolting, discontinuous—are the adjectives by which we are tempted to describe it. And yet from out the bosom of it a partial ideality constantly arises which keeps alive our aspiration that the whole may some day be construed in ideal form. Not only do the materials lend themselves under certain circumstances to æsthetic manipulation, but underlying their worst disjointedness are three great continua in which for each of us reason's ideal is actually reached. I mean the continua of memory or personal consciousness, of time and of space. In these great matrices of all we know, we are absolutely at home. The things we meet are many and yet are one; each is itself and yet all belong together; continuity reigns, yet individuality is not lost.

Consider, for example, space. It is a unit. No force can in any way break, wound, or tear it. It has no joints between which you can pass your amputating knife, for it penetrates the knife and is not split. Try to make a hole in space by annihilating an inch of it. To make a hole you must drive something else through. But what can you drive through space except what is itself spatial?

But notwithstanding it is this very paragon of unity, space in its parts contains an infinite variety, and the unity and the variety do not contradict each other, for they obtain in different respects. The one is the whole, the many are the parts. Each part is one again, but only one fraction, and part lies beside part in absolute nextness, the very picture of peace and non-contradiction. It is true that the space between two points both unites and divides them, just as the bar of a dumb-bell both unites and divides the two balls. But the union and the division are not *secundum idem*: it divides them by keeping them out of the space between, it unites them by keeping them

out of the space beyond; so the double function presents no inconsistency. Self-contradiction in space could only ensue if one part tried to oust another from its position, but the notion of such an absurdity vanishes in the framing, and cannot stay to vex the mind.¹ Beyond the parts we see or think at any given time extend farther parts; but the beyond is homogeneous with what is embraced and follows the same law; so that no surprises, no foreignness can ever emerge from space's womb.

Thus with space our intelligence is absolutely intimate; it is rationality and transparency incarnate. The same may be said of the ego and of time. But, if for simplicity's sake we ignore them, we may truly say that when we desiderate rational knowledge of the world the standard set by our knowledge of space is what governs our desire.² Cannot the breaks, the jolts, the margin of foreignness, be exorcised from other things and leave them unitary like the space they fill? Could this be done, the philosophic kingdom of heaven would be at hand.

But the moment we turn to the material qualities of being, we find the continuity ruptured on every side. A fearful jolting begins. Even if we simplify the world by reducing it to its mechanical bare poles, atoms and their motions, the discontinuity is bad enough. The laws of clash, the effects of distance upon attraction and repulsion, all seem arbitrary collocations of data. The atoms themselves are so many independent facts, the existence of any one of which in no wise seems to involve the existence of the rest. We have not

¹ The seeming contradiction between the infinitude of space and the fact that it is all finished and given and there, can be got over in more than one way. The simplest way is by idealism, which distinguishes between space as actual and space as potential. For idealism, space only exists so far as it is represented; but all actually represented spaces are finite; it is only possibly-representable spaces that are infinite.

² Not only for simplicity's sake do we select Space as the paragon of a rationalising continuum. Space determines the relations of the items that enter it, in a far more intricate way than does Time; in a far more fixed way than does the Ego. By this last clause I mean that, if things are in space at all, they must conform to geometry; whilst the being in an Ego at all need not make them conform to logic or any other manner of rationality. Under the sheltering wings of a Self the matter of unreason can lodge itself as safely as any other kind of content. One cannot but respect the devoutness of the Ego-worship of some of our English-writing Hegelians. But at the same time one cannot help fearing lest the monotonous contemplation of so barren a principle as that of the Pure Formal Self, (which, be it never so essential a condition of the existence of a world of organised experience at all, must notwithstanding take its own *character* from, not give the character to, the separate empirical data over which its mantle is cast), one cannot but fear, I say, lest the religion of the Transcendental Ego should, like all religions of the "one thing needful," end by sterilising and occluding the minds of its believers.

banished discontinuity, we have only made it finer-grained. And to get even that degree of rationality into the universe we have had to butcher a great part of its contents. The secondary qualities we stripped off from the reality and swept into the dust-bin labelled "subjective illusion," still *as such* are facts, and must themselves be rationalised in some way.

But when we deal with facts believed to be purely subjective, we are farther than ever from the goal. We have not now the refuge of distinguishing between the "reality" and its appearances. Facts of thought being the only facts, differences of thought become the only differences, and identities of thought the only identities there are. Two thoughts that *seem* different are different to all eternity. We can no longer speak of heat and light being reconciled in any *tertium quid* like wave-motion. For motion is motion, and light is light, and heat heat for ever, and their discontinuity is as absolute as their existence. Together with the other attributes and things we conceive, they make up Plato's realm of immutable ideas. Neither *per se* calls for the other, hatches it out, is its "truth," creates it, or has any sort of inward community with it, except that of being comparable in an ego and found more or less differing, or more or less resembling, as the case may be. The world of qualities is a world of things almost wholly discontinuous *inter se*. Each only says, "I am that I am," and each says it "on its own hook" and with absolute monotony. The continuities of which they *partake*, in Plato's phrase, the ego, space, and time are for most of them the only grounds of union they possess.

It might seem as if in the mere "partaking" there lay a contradiction of the discontinuity. If the white must partake of space, the heat of time, and so forth; do not whiteness and space, heat and time, mutually call for or help to create each other?

Yes; a few such *a priori* couplings must be admitted. They are the axioms: no feeling except as occupying some space and time, or as a moment in some ego; no motion but of something moved; no thought but of an object; no time without a previous time, and the like. But they are limited in number, and they obtain only between excessively broad genera of concepts, and leave quite undetermined what the specifications of those genera shall be. What feeling shall fill *this* time, what substance execute *this* motion, what qualities combine in *this* being, are as much unanswered questions as if the metaphysical axioms never existed at all.

The existence of such syntheses as they are does then but slightly mitigate the jolt, jolt, jolt we get when we pass over the facts of the world. Everywhere indeterminate variables,

subject only to these few vague enveloping laws, independent in all besides—such seems the truth.

In yet another way too, ideal and real are so far apart that their conjunction seems quite hopeless. To have our cake and eat it, to lose our soul and save it, to enjoy the physical privileges of selfishness and the moral luxury of altruism at the same time—would be the ideal. But the real offers us these terms in the shape of mutually exclusive alternatives of which only one can be true at once, so that we must choose, and in choosing murder one possibility. The wrench is absolute,—“Either—or!” Just as whenever I bet a hundred dollars on an event, there comes an instant when I am a hundred dollars richer or poorer without any intermediate degrees passed over; just as my wavering between a journey to Portland or to New York does not carry me from Cambridge in a resultant direction in which both motions are compounded, say to Albany, but at a given moment results in the conjunction of reality in all its fulness for one alternative and impossibility in all its fulness for the other: so the bachelor joys are utterly lost from the face of being for the married man, who must henceforward find his account in something that is not them but is good enough to make him forget them; so the careless and irresponsible living in the sunshine, the “unbuttoning after supper and sleeping on benches in the afternoon,” are stars that have set upon the path of him who in good earnest makes himself a moralist. The transitions are abrupt, absolute, truly shot out of a pistol, for while many possibilities are called, the few that are chosen are chosen in all their sudden completeness.

Must we then think that the world that fills space and time can yield us no acquaintance of that high and perfect type yielded by empty space and time themselves? Is what unity there is in the world mainly derived from the fact that the world is *in* space and time and “partakes” of them? Can no vision of it forestall the facts of it, or know from some fractions the others, before the others have arrived? Are there real ambiguities which forbid there being any equivalent for the happening of it all but the happening itself? Can we gain no anticipatory assurance that what is to come will have no strangeness? Is there no substitute, in short, for life but the living itself in all its long-drawn weary length and breadth and thickness?

In the negative reply to all these questions, a modest common sense finds no difficulty in acquiescing. To such a way of thinking the notion of “partaking” has a deep and real significance. Who partakes of a thing enjoys his share and comes in contact with the thing and its other partakers. But he claims no more.

His share in no wise negates the thing or their share ; nor does it preclude his possession of reserved and private powers with which they have nothing to do, and which are not all absorbed in the mere function of sharing. Why may not the world be a sort of republican banquet of this sort, where all the qualities of being respect each other's personal sacredness, yet sit at the common table of space and time ?

To me this view seems deeply probable. Things cohere, but the act of cohesion itself implies but few conditions, and leaves the rest of their qualifications indeterminate. As the first three notes of a tune comport many endings, all melodious, but the tune is not named till a particular ending has actually come ; so the parts actually known of the universe may comport many ideally possible complements. But as the facts *are* not the complements, so the knowledge of the one is not the knowledge of the other, in anything but the few necessary elements of which all must partake in order to be together at all. Why, if one act of knowledge could from one point take in the total perspective, with all mere possibilities abolished, should there ever have been any thing more than that act ? Why duplicate it by the tedious unrolling inch by inch of the fore-done reality ? No answer seems possible. On the other hand if we stipulate only a partial community of partially independent powers, we see perfectly why no one part controls the whole view, but each detail must come and be actually given, before, in any special sense, it can be said to be determined at all. This is the moral view, the view that gives to other powers the same freedom it would have itself,—not the ridiculous “freedom to do right,” which in my mouth can only mean the freedom to do as *I* think right, but the freedom to do as *they* think right, or wrong either. After all, what accounts do the nethermost bounds of the universe owe to me ? By what insatiate conceit and lust of intellectual despotism do I arrogate the right to know their secrets, and from my philosophic throne to play the only airs they shall march to, as if I were the Lord's anointed ? Is not my knowing them at all a gift and not a right ? And shall it be given before they are given ? *Data ! Gifts !* Something to be thankful for ! It is a gift that we can approach things at all, and by means of the time and space of which our minds and they partake, alter our actions so as to meet them.

There are “bounds of ordnance” set for all things, where they must pause or rue it. “Facts” are the bounds of human knowledge, set for it, not by it.

Now to a mind like Hegel's such pusillanimous twaddle sounds

simply loathsome. Bounds that we can't overpass! Data! Facts that say "Hands off, till we are given"! Possibilities we can't control! A banquet of which we merely share! Heavens, this is intolerable; such a world is no world for a philosopher to have to do with. He must have all or nothing. If the world can't be rational in my sense, in the sense of unconditional surrender, I refuse to grant that it is rational at all. It is pure incoherence, a chaos, a nulliverse, to whose haphazard sway I will not truckle. But no, this is not the world. The world is philosophy's own; a Single Block, of which, if she once get her teeth on any part, the whole shall inevitably become her prey and feed her all-devouring theoretic maw. Naught shall be but the necessities she creates, and impossibilities. Freedom shall mean freedom to obey her will. Ideal and actual shall be one; she, and I as her champion, will be satisfied on no lower terms.

The insolence of sway, the *ἰβρις* on which gods take vengeance, is in temporal and spiritual matters usually admitted to be a vice. A Bonaparte and a Philip II. are called monsters. But when an *intellect* is found insatiate enough to declare that all existence must bend the knee to its requirements, we do not call its owner a monster, but a philosophic prophet. May not this be all wrong? Is there any one of our functions exempted from the common lot of liability to excess? And where everything else must be contented with its part in the universe, shall the theorising faculty ride rough-shod over the whole?

I confess I can see no *a priori* reason for the exception. He who claims it must be judged by the consequences of his acts, and by them alone. Let Hegel then confront the universe with his claim and see how he can make the two match.

The universe absolutely refuses to let him travel without jolt. Time, space, and his ego are continuous; so are degrees of heat, shades of light and colour, and a few other serial things; so too do potatoes call for salt, and cranberries for sugar, in the taste of one who knows what salt and sugar are. But on the whole there is naught to soften the shock of surprise to his intelligence, as it passes from one quality of being to another. Light is not heat, heat is not light, and to him who holds the one the other is not given till it give itself. Real being comes and goes moreover from any concept at its own sweet will with no permission asked of the conceiver. In despair must Hegel lift vain hands of imprecation, and since he will take nothing but the whole, he must throw away even the part he might retain, and call the nature of things an *absolute* muddle and incoherence.

But hark ! What wondrous strain is this that steals upon his ear ? Incoherence itself, may it not be the very sort of coherence I require ? Muddle, is it anything but a peculiar sort of transparency ? Is not jolt passage ? Is friction other than a kind of lubrication ? Is not a chasm a filling ? a queer kind of filling, but a filling still. Why seek for a glue to hold things together when their very falling apart is the only glue you need ? Let all that negation which seemed to disintegrate the universe be the mortar that combines it, and the problem stands solved.

The paradoxical character of the notion could not fail to please a mind monstrous even in its native Germany, where mental excess is endemic. Richard, for a moment brought to bay, is himself again. He vaults into the saddle, and from that time his career is that of a philosophic desperado, one series of outrages upon the chastity of thought.

And can we not ourselves sympathise with his mood in some degree ? The old receipts of squeezing the thistle and taking the bull by the horns have many applications. An evil frankly accepted loses half its sting and all its terror. The Stoics had their cheap and easy way of dealing with evil. *Call* your woes goods, they said, refuse to *call* your lost blessings by that name, and you are happy. So of the unintelligibilities : *call* them means of intelligibility, and what farther do you require ? There is even a more legitimate excuse than that. In the *exceedingness* of the facts of life over our formulas lies a standing temptation at certain moments to give up trying to say anything adequate about them, and to take refuge in wild and whirling words which but confess our impotence before their ineffability. Thus Baron Bunsen writes to his wife : " Nothing is near but the far ; nothing true but the highest ; nothing credible but the inconceivable ; nothing so real as the impossible ; nothing clear but the deepest ; nothing so visible as the invisible ; and no life is there but through death ". Of these ecstatic moments the *credo quia impossibile* is the classical expression. Hegel's originality lies in his making their mood permanent and sacramental and authorised to supersede all others—not as a mystical bath and refuge for feeling when tired Reason sickens of her intellectual responsibilities (thank Heaven ! that bath is always ready), but as the very form of intellectual responsibility itself.

And now after this long introduction, let me trace some of Hegel's ways of applying his discovery. His system resembles a mouse-trap, in which, if you once pass the door, you may be lost for ever. Safety lies in not entering. Hegelians have

anointed, so to speak, the entrance with various considerations which, stated in an abstract form, are so plausible as to slide us unresistingly and almost unwittingly through the fatal arch. It is not necessary to drink the ocean to know that it is salt; nor need a critic dissect a whole system after proving that its premisses are rotten. I shall accordingly confine myself to a few of the points that captivate beginners most; and assume that if they break down, so must the system which they prop.

First of all, Hegel has to do utterly away with the sharing and partaking business he so much loathes. He will not call contradiction the glue in one place and identity in another; that is too half-hearted. Contradiction must be a glue universal, and must derive its credit from being shown to be latently involved in cases that we hitherto supposed to embody pure continuity. Thus, the relations of an ego with its objects, of one time with another time, of one place with another place, of a cause with its effect, of a thing with its properties, and especially of parts with wholes, must be shown to involve contradiction. Contradiction, shown to lurk in the very heart of coherence and continuity, cannot after that be held to defeat them, and must be taken as the universal solvent. Or rather there is no longer any need of a solvent. To "dissolve" things in identity was the dream of earlier cruder schools. Hegel will show that their very difference is their identity, and that in the act of detachment the detachment is undone and they fall into each other's arms.

Now at the very outset it seems rather odd that a philosopher who pretends that the world is absolutely rational, or in other words that it can be completely understood, should fall back on a principle, the identity of contradictories, which utterly defies understanding, and obliges him in fact to use the word understanding, whenever it occurs in his pages, as a term of contempt. Take the case of space we used above. The common man who looks at space believes there is nothing in it to be acquainted with beyond what he sees; no hidden machinery, no secrets, nothing but the parts as they lie side by side and make the static whole. His intellect is satisfied with accepting space as an ultimate genus of the given. But Hegel cries to him: "Dupe, dost thou not see it to be one nest of incompatibilities? Do not the unity of its wholeness and the diversity of its parts stand in patent contradiction? Does it not both unite and divide things, and but for this strange and irreconcilable activity, would it be at all? The hidden dynamism of self-contradiction is what incessantly produces the static appearance by which your sense is fooled."

But if the man ask how self-contradiction *can* do all this, and

how its dynamism may be seen to work, Hegel can only reply by showing him the space itself and saying: "Lo, *thus*". In other words, instead of the principle of explanation being more intelligible than the thing to be explained, it is absolutely unintelligible if taken by itself; and must appeal to its pretended product to prove its existence. Surely such a system of explaining *notum per ignotum*, of making the *explicans* borrow credentials from the *explicand*, and of creating paradoxes and impossibilities where none were suspected, is a strange candidate for the honour of being a complete rationaliser of the world.

The principle of the contradictoriness of identity and the identity of contradictories is the essence of the Hegelian system. But what probably washes this principle down most with beginners is the combination in which its author works it with another principle which is by no means characteristic of his system, and which, for want of a better name, might be called the "principle of totality". This principle says that you cannot adequately know even a part until you know of what whole it forms a part. As Aristotle writes and Hegel loves to quote, an amputated hand is not even a hand. And as Tennyson says:

"Little flower—but if I could understand
What you are, root and all, and all in all,
I should know what God and man is."

Obviously until we have taken in all the relations, immediate or remote, into which the thing actually enters or potentially may enter, we do not know all *about* the thing.

And obviously for such an exhaustive acquaintance with the thing, an acquaintance with every other thing, actual and potential, near and remote, is needed; so that it is quite fair to say that omniscience alone can completely know any one thing as it stands. Standing in a world of relations, that world must be known ere the thing is fully known. This doctrine is of course an integral part of empiricism, an integral part of common sense. Since when could good men not apprehend the passing moment in the light of life's larger sweep? not grow dispassionate the more they stretched their view? Did the "law of sharing" so little legitimate their procedure, that a law of identity of contradictories, forsooth! must be trumped up to give it scope? Shame on the idea!

Hume's account of causation is an excellent illustration of the way Empiricism may use the principle of totality. We call something a cause; but we at the same time deny its effect to be in any latent way contained in, or substantially identical with it. We thus cannot tell in what respect its causality obtains until its

effect has actually supervened. The effect, then, or something beyond the thing is what makes the thing to be so far as it is a cause. Humism thus says that its causality is something adventitious and not necessarily given when its other attributes are there. Generalising this, empiricism contends that we must everywhere distinguish between the intrinsic being of a thing and its relations, and, among these, between those that are essential to our knowing it at all and those that may be called adventitious. The thing as actually present in a given world is there with *all* its relations; for it to be known as it *there* exists, they must be known too, and it and they form a single fact for any consciousness large enough to embrace that world as a unity. But what constitutes this singleness of fact, this unity? Empiricism says: nothing but the relation-yielding matrix in which the several items of the world find themselves embedded; time, namely, and space, and the mind of the knower. And it says that were some of the items quite different from what they are and others the same, still for aught we can see, an equally unitary world might be, provided each item were an object for consciousness and occupied a determinate point in space and time. All the *adventitious* relations would in such a world be changed, along with the intrinsic natures and places of the beings between which they obtained; but the "principle of totality" in knowledge would in no wise be affected.

But Hegelism dogmatically denies all this to be possible. In the first place it says there are no intrinsic natures that may change; in the second it says there are no adventitious relations. When the relations of what we call a thing are told, no *caput mortuum* of intrinsicality, no "nature" is left. *The relations soak up all there is of the thing*; the "items" of the world are but *foci* of relation with other *foci* of relation. *And all the relations are necessary.* The unity of the world has nothing to do with any "matrix". The matrix and the items, each with all, make a unity, simply because each in truth *is* all the rest. The proof lies in the *hegelian* principle of totality, which demands that if any one part be posited alone all the others shall forthwith *emanate* from it and infallibly reproduce the whole. In the *modus operandi* of the emanation comes in, as I said, that partnership of the principle of totality with that of the identity of contradictories that so recommends the latter to beginners in Hegel's philosophy. To posit one item alone is to *deny* the rest; to deny them is to refer to them; to refer to them is to begin, at least, to bring them on the scene; and to begin is in the fulness of time to end.

If we call this a Monism, Hegel is quick to cry, Not so! To

say simply that the one item is the rest of the universe is as false and one-sided as to say that it is simply itself. It is both and neither; and the only condition on which we gain the right to affirm that it is, is that we fail not to keep affirming all the while that it is not, as well. Thus the truth refuses to be expressed in any single act of judgment or sentence. The world appears as a monism *and* a pluralism, just as it appeared in our own introductory exposition.

But the trouble that keeps us and Hegel from ever joining hands over this apparent formula of brotherhood, is that we distinguish, or try to distinguish, the respects in which the world is one from those in which it is many, while all such stable distinctions are what he most abominates. The reader may decide which procedure helps his reason most. For my own part, the time-honoured formula of empiricist pluralism, that the world cannot be set down in any single proposition, grows less instead of more intelligible when I add, "And yet the different propositions that express it are one"!! The unity of the propositions is that of the mind that harbours them. Anyone who insists that their diversity is itself their unity can only do so because he loves obscurity and mystification for their own pure sakes.

Where you meet with a contradiction among realities, Herbart used to say, it shows you have failed to make a real distinction. Hegel's sovereign method of going to work and saving all possible contradictions, lies in pertinaciously refusing to distinguish. He takes what is true of a term *secundum quid*, treats it as true of the same term *simpliciter*, and then, of course, applies it to the term *secundum aliud*. A good example of this is found in the first triad. This triad shows that the mutability of the real world is due to the fact that Being constantly negates itself, that whatever *is* by the same act *is not*, and gets undone and swept away, and that thus the irremediable torrent of life about which so much rhetoric has been written has its roots in an ineluctable necessity which lies revealed to our logical Reason. This notion of a Being for ever stumbling over its own feet and having to change to exist at all, is a very picturesque symbol of the reality, and probably one of the points which make young readers feel as if a deep core of truth lay in the system.

But how is the reasoning done? Pure Being is assumed, without determinations, Being *secundum quid*. In this respect it agrees with nothing. Therefore *simpliciter* it is nothing; wherever we find it, it is nothing; crowned with complete determinations then, or *secundum aliud*, it is nothing still, and *hebt sich auf*.

It is as if we said: Man without his clothes may be named "the Naked". Therefore man *simpliciter* is the naked. And finally man with his hat, shoes, and overcoat on is the naked still.

Of course we may in this instance or any other repeat that the conclusion is strictly true, however comical it seems. Man within the clothes is naked, just as he is without them. Man would never have invented the clothes had he not been naked. The fact of his being clad at all does prove his essential nudity. And so in general, the form of any judgment, being the addition of a predicate to a subject, shows that the subject has been conceived without the predicate, and thus by a strained metaphor may be called the predicate's negation. Well and good! let the expression pass. But we must notice this. The judgment has now created a new subject, the naked-clad, and all propositions regarding this must be judged on their own merits, for those true of the old subject, "the naked," are no longer true of this one. For instance, we cannot say because the naked man pure and simple must not enter the drawing-room or is in danger of taking cold, that the naked man with his clothes on will take cold or must stay in his bedroom. Hold to it eternally that the clad man *is* still naked if it amuse you—'tis designated in the bond; but the so-called contradiction is a sterile boon. Like Shylock's pound of flesh, it leads to no consequences. It does not entitle you to one drop of his christian blood either in the way of catarrh, social exclusion, or what further results pure nakedness may involve.

In a version of the first step given by our foremost American Hegelian,¹ we find this playing with the necessary form of judgment. Pure Being, he says, has no determinations. But the having none is *itself* a determination. Wherefore pure Being contradicts its own self, and so on. Why not take heed to the *meaning* of what is said? When we make the predication concerning pure Being our meaning is merely the denial of all *other* determinations than the particular one we make. The showman who advertised his elephant as "larger than any elephant in the world except himself" must have been in an hegelian country where he was afraid the audience would *nachgrübeln*: "This elephant, larger than any in the world, involves a contradiction; for he himself is in the world, and so stands endowed with the virtue of being both larger and smaller than himself,—a perfect hegelian elephant, whose immanent self-contradictoriness can only be removed in a higher synthesis. Show us the higher synthesis! We don't care to see such a mere abstract

¹ *Journal of Speculative Philosophy*, Vol. VIII., p. 37.

creature as your elephant." It may be (and it was indeed suggested in antiquity) that all things are of their own size by being both larger and smaller than themselves. But in the case of this elephant the scrupulous showman nipped such philosophising and all its inconvenient consequences in the bud, by explicitly intimating that larger than any *other* elephant was all he meant.

Hegel's quibble with this word *other* exemplifies the same fallacy. All "others," as such, are according to him identical. That is, "otherness," which can only be predicated of a given thing A, *secundum quid*, as other than B, &c., is predicated *simpliciter*, and made to identify the A in question with B, which is other only *secundum aliud*—namely other than A. Another maxim that Hegelism is never tired of repeating is that "to know a limit is already to be beyond it". "Stone walls do not a prison make, nor iron bars a cage." The inmate of the penitentiary shows by his grumbling that he is still in the stage of abstraction and of separative thought. The more keenly he thinks of the fun he might be having outside, the more deeply he ought to feel that the walls identify him with it. They set him beyond them *secundum quid*, in imagination, in longing, in despair; *argal* they take him there *simpliciter* or every way, in flesh, in power, in deed. Foolish convict, to ignore his blessings!

Another mode of stating his principle is this: "To know the finite, as such, is also to know the infinite". Expressed in this abstract shape the formula is as insignificant as it is unobjectionable. We can cap every word with a negative particle, and the word *finished* immediately suggests the word *unfinished* and we know the two words together.

But it is an entirely different thing to take the knowledge of a concrete case of ending and to say that it virtually makes us acquainted with other concrete facts *in infinitum*. For, in the first place, the end may be an absolute one. The *matter* of the universe, for instance, is according to all appearances in finite amount; and if we knew that we had counted the last bit of it, infinite knowledge in that respect so far from being given would be impossible. With regard to *space*, it is true that in drawing a bound we are aware of more. But to treat this little fringe as the equal of infinite space is ridiculous. It resembles infinite space *secundum quid*, or in but one respect—its spatial quality. We believe it homogeneous with whatever spaces may remain; but it would be fatuous to say, because one dollar in my pocket is homogeneous with all the dollars in the country that to have it is to have them. The further points of space are

as numerically distinct from the fringe as the dollars from the dollar, and not until we have actually intuited them can we be said to "know" them *simpliciter*. The Hegelian reply is that the *quality* of space constitutes its only *worth*, and that there is nothing true, good, or beautiful to be known in the spaces beyond which is not already known in the fringe. This introduction of a eulogistic term into a mathematical question is original. The "true" and the "false" infinite are about as appropriate distinctions in a discussion of cognition as the good and the naughty rain would be in a treatise on meteorology. But when we grant that all the "worth" of the knowledge of distant spaces is due to the knowledge of what they may carry in them, it then appears more than ever absurd to say that the knowledge of the fringe is a substitute for the infinitude of distant knowledge. The distant spaces *simpliciter* are not yet yielded to our thinking, and even if they were yielded *simpliciter* would not be yielded *secundum aliud*, or in respect to their material filling out.

Shylock's bond was an omnipotent instrument compared with this knowledge of the finite, which remains the ignorance it always was, till the infinite by its own act has piece by piece placed itself in our hands.

Here Hegelism cries out: "By the identity of the knowledges of infinite and finite I never meant that one could be a *substitute* for the other, nor does true philosophy ever mean by identity capacity for substitution". This sounds suspiciously like the good and the naughty infinite, or rather like the mysteries of the Trinity and the Eucharist. To the unsentimental mind there are but two sorts of identity, total identity and partial identity. Where the identity is total the things can be substituted wholly for each other. Where substitution is impossible it must be that the identity is incomplete. It is the duty of the student then to ascertain the exact *quid*, *secundum* which it obtains, as we have tried to do above. Even the Catholic will tell you that when he believes in the identity of the wafer with Christ's body, he does not mean in all respects, so that he might use it to exhibit muscular fibre, or a cook make it smell like baked meat in the oven. He means that in the one sole respect of nourishing his being in a certain way, it is identical with and *can* be substituted for the very body of his Redeemer.

"The knowledge of opposites" is one of the hegelian first principles, of which the preceding are perhaps only derivatives. Here again Hegelism takes "knowledge" *simpliciter*, and substituting it for a particular respect, avails itself of the confusion to

cover other respects never originally implied. When the knowledge of a thing is given us, we no doubt think that the thing may or must have an opposite. This postulate of something opposite we may call a "knowledge of the opposite" if we like, but it is a knowledge of it in only that one single respect, that it is something opposite. No number of opposites to a quality we have never directly experienced could ever lead us positively to infer what that quality is. There is a jolt between the negation of them and the actual positing of it in its proper shape, that twenty logics of Hegel harnessed abreast can't drive us smoothly over.

The use of the maxim "All determination is negation" is the fattest and most full-blown application of the method of refusing to distinguish. Taken in its vague confusion it probably does more than anything else to produce the sort of flicker and dazzle which are the first mental conditions for the reception of Hegel's system. The word negation taken *simpliciter* is treated as if it covered an indefinite number of *secundums*, culminating in the very peculiar one of self-negation. Whence finally the conclusion is drawn that assertions are universally self-contradictory. As this is an important matter, it seems worth while to treat it a little minutely.

When I measure out a pint, say of milk, and so determine it, what do I do? I virtually make two assertions regarding it: it *is* this pint, it is *not* those other gallons. One of these is an affirmation, the other a negation. Both have a common subject, but the predicates being mutually exclusive, the two assertions lie beside each other in endless peace.

I may with propriety be said to make assertions more remote still—assertions of which those other gallons are the subject. As it is not they, so are they not the pint which it is. The determination "this is the pint" carries with it the negation: "those are not the pints". Here we have the same predicate, but the subjects are exclusive of each other, so there is again endless peace. In both couples of propositions negation and affirmation are *secundum aliud*: this is *a*; this isn't not-*a*. This kind of negation involved in determination cannot possibly be what Hegel wants for his purposes. The table is not the chair, the fireplace is not the cupboard—these are literal expressions of the law of identity and contradiction, those principles of the abstracting and separating understanding for which Hegel has so sovereign a contempt, and which his logic is meant to supersede.

And accordingly Hegelians pursue the subject farther, saying there is in every determination an element of real conflict. Do you not in determining "the milk" to this pint, *exclude* it

for ever from the chance of being those gallons, frustrate it from expansion? And so do you not equally exclude them from the being which it now maintains as its own?

Assuredly if you had been hearing of a land flowing with milk and honey and had gone there with unlimited expectations of the rivers the milk would fill, and if you found there was but this single pint in the whole country, the determination of the pint would exclude another determination which your mind had previously made of the milk. There would be a real conflict resulting in the victory of one side. The "rivers" would be negated by the single pint being affirmed, and as rivers and pint are affirmed of the same milk (first as supposed and then as found) the contradiction would be complete.

But it is a contradiction that can never by any chance occur in real nature or being. It can only occur between a false representation of a being and the true idea of the being where actually cognised. The first got into a place where it had no rights and had to be ousted. But in *rerum naturâ* things don't get into each other's logical places. The gallons first spoken of never say "We are the pint"; the pint never says "I am the gallons". It never tries to expand, and so there is no chance for anything to exclude or negate it so far as it is affirmed. It thus remains affirmed absolutely.

Can it be believed in the teeth of these elementary truths that the principle *determinatio negatio* is held throughout Hegel to imply an active contradiction, conflict, and exclusion? Do the horse-cars jingling outside negate me writing in this room? Do I, reader, negate you? Of course if I say, "Reader, we are two, and therefore *I am* two," I negate you, for I am actually thrusting a part into the seat of the whole. The orthodox logic expresses the fallacy by saying the *we* is taken by me distributively instead of collectively. But as long as I do not make this blunder, and am content with my part, we all are safe. In *rerum naturâ* parts remain parts. Can you imagine one position in space trying to get into the place of another position and having to be "contradicted" by that other? Can you imagine your thought of an object trying to dispossess the real object from its being and so being negated by it? The great, the sacred law of partaking, the noiseless step of continuity, seems something that Hegel cannot possibly understand. All or nothing is his one idea. For him each point of space, of time, each feeling in the ego, each quality of being is clamouring, "I am the all. There is naught else but me." This clamour is its essence, which has to be negated in another act which gives it its true determination. What there is affirmative in this determination

is thus the mere residuum left from the negation by others of the negation it originally applied to them.

But why talk of residuum? The Kilkenny cats of fable could leave a residuum in the shape of their undevoured tails. But the Kilkenny cats of existence as it appears in the pages of Hegel are all-devouring and leave no residuum. Such is the unexampled fury of their onslaught that they get clean out of themselves and into each other, nay more, pass right through each other, and then "return into themselves" ready for another round, as insatiate, but as inconclusive as the one that went before.

If I characterised Hegel's own mood as ὕβρις, the insolence of excess, what shall I say of the mood he ascribes to Being? Man makes the gods in his image, and Hegel, in daring to insult the spotless σωφρόσυνη of space and time, the bound-respecters, in branding as strife that law of sharing under whose sacred keeping, like a strain of music, like an odour of incense (as Emerson says) the dance of the atoms goes forward still, seems to me but to manifest his own deformity.

This leads me to animadvert on an erroneous inference which hegelian idealism makes from the form of the negative judgment. Every negation, it says, must be an intellectual act. Even the most naïf realism will hardly pretend that the non-table as such exists *in se* after the same fashion as the table does. But table and non-table, since they are given to our thought together, must be consubstantial. Try to make the position or affirmation of the table as simple as you can, it is also the negation of the non-table, and thus positive. Being itself seems after all but a function of intelligence, like negation. Idealism is proved, realism is unthinkable. Now I have not myself the least objection to Idealism, an hypothesis which voluminous considerations make plausible, and whose difficulties may be cleared away any day by new discriminations or discoveries. But I object to proving by these patent ready-made *a priori* methods that which can only be the fruit of a wide and patient induction. For the truth is that our affirmations and negations do not stand on the same footing at all, and are anything but consubstantial. An affirmation says something about an objective existence. A negation says something *about an affirmation*, namely, that it is false. There are no negative predicates or falsities in nature. Being makes no false hypotheses that have to be contradicted. The only denials she can be in any way construed to perform are denials of our errors. This shows plainly enough that denial must be of something mental, since the thing denied is always a fiction. "The table

is not the chair" supposes the speaker to have been playing with the false notion that it may have been the chair. But affirmation may perfectly well be of something having no such necessary and constitutive relation to thought. Whether it really is of such a thing is for harder considerations to decide.

If Idealism be true, the great question that presents itself is whether its truth involve the necessity of an infinite, unitary, and omniscient consciousness, or whether a republic of semi-detached consciousnesses will do, consciousnesses united by a certain common fund of representations but each possessing a private store which the others do not share. Either hypothesis is to me conceivable. But whether the egos be one or many, the *nextness* of representations to each other within them is the principle of unification of the universe. To be thus consciously next to some other representation is the condition to which each representation must submit, under penalty of being excluded from this universe, and like Lord Dundreary's bird "flocking all alone," and forming a separate universe by itself. But this is only a condition of which the representations *partake*. It leaves all their other determinations undecided. To say, because representation *b* cannot be in the same universe with *a* without being *a*'s *neighbour*, that therefore *a* possesses, involves or necessitates *b*, hide and hair, flesh and fell, all appurtenances and belongings, is only the silly hegelian All-or-Nothing insatiateness once more.

Hegel's own logic, with all the complex hocus-pocus of its triads, utterly fails to prove his position. The only evident compulsion which representations exert upon each other is compulsion to submit to the conditions of entrance into the same universe with them—the conditions of continuity, of selfhood, space and time—under penalty of being excluded. But *what* this universe shall be is a matter of fact which we cannot decide till we know what representations have submitted to these its sole conditions. The conditions themselves impose no further requirements. In short the notion that real contingency and ambiguity may be features of the real world is a perfectly unimpeachable hypothesis. Only in such a world can moral judgments have a claim to be. For the bad is that which takes the place of something else which possibly might have been where *it* now is, and the better is that which absolutely might be where it absolutely is not. In the universe of Hegel—the Absolute Block whose parts have no loose play, the pure plethora of necessary being with the oxygen of possibility all suffocated out of its lungs—there can be neither good nor bad, but one dead level of mere fate.

But I have tired the reader out. The worst of criticising Hegel is that the very arguments we use against him give forth strange and hollow sounds that make them seem almost as fantastic as the errors to which they are addressed. The sense of a universal mirage, a ghostly unreality steals over us, which is the very moonlit atmosphere of Hegelism itself. What wonder then if instead of converting, our words do but rejoice and delight those already baptised in the Faith of Confusion? To their charmed senses we all seem children of Hegel together, only some of us have not the wit to know our own father. Just as Romanists are sure to inform us that our reasons against Papal Christianity unconsciously breathe the purest spirit of Catholicism, so Hegelism benignantly smiles at our exertions and murmurs: "If the red slayer think he slays". "When me they fly, I am the wings, &c."

To forefend this unwelcome adoption let me recapitulate in a few propositions the reasons why I am *not* an hegelian.

1. We cannot have our cake and eat it. That is, the only real contradiction there can be between thoughts is where one is true, the other false. When this happens one must go for ever, nor is there any "higher synthesis" in which both can wholly revive.

2. A chasm is not a bridge in any utilisable sense; that is, no mere negation can be the instrument of a positive advance in thought.

3. The continua, time, space, and the ego are bridges, because they are without chasm.

4. But they bridge over the chasms between represented qualities only partially.

5. This partial bridging, however, makes the qualities share in a common world.

6. The other characteristics of the qualities are separate facts.

7. But the same quality appears in many times and spaces. Identity of the quality wherever found becomes thus a further means by which the jolts are reduced.

8. But between different qualities jolts remain. Each, as far as the other is concerned, is an absolutely separate and contingent being.

9. The moral judgment leads us to postulate as irreducible the contingencies thus conceived.

10. The elements thus mutually contingent are not, in conflict so long as they partake of the continua of time, space, &c., partaking being the exact opposite of strife. They conflict only when, as mutually exclusive possibilities, they strive to possess themselves of the same parts of time, space, and ego.

11. That there are such real conflicts, irreducible to any in-

telligence, and giving rise to an excess of possibility over actuality, is an hypothesis, but a credible one. No philosophy should pretend to be anything more.

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NOTE.—Since the manuscript of the preceding article was committed to the Editor's hands, I have made some observations on the effects of nitrous-oxide-gas-intoxication which have made me understand better than ever before both the strength and the weakness of Hegel's philosophy. I strongly urge others to repeat the experiment, which with pure gas is short and harmless enough. The effects will of course vary with different individuals, just as they vary in the same individual from time to time; but it is probable that in the former case as in the latter a generic resemblance will obtain. With me, as with every other individual of whom I have heard, the keynote of the experience is the tremendously exciting sense of an intense metaphysical illumination. Truth lies open to the view in depth beneath depth of almost blinding evidence. The mind sees all the logical relations of being with an apparent subtlety and instantaneity to which its normal consciousness offers no parallel; only as sobriety returns, the feeling of insight fades, and one is left staring vacantly at a few disjointed words and phrases, as one stares at a cadaverous-looking snow peak from which the sunset glow has just fled, or at the black cinder left by an extinguished brand.

The immense emotional sense of *reconciliation* that characterises the "maudlin" stage of alcoholic drunkenness, a stage that seems silly to lookers-on, but the subjective rapture of which probably constitutes a chief part of the temptation to vice, is well known. The centre and the periphery of things seem to come together. The ego and its objects, the *meum* and the *tuum*, are one. Now this, only a thousandfold enhanced, was the effect upon me of the gas: and its first result was to make peal through me with unutterable power the conviction that Hegelism was true after all, and that the deepest convictions of my intellect hitherto were wrong. Whatever idea or representation occurred to the mind was seized by the same logical forceps, and served to illustrate the same truth, and that truth was that every opposition, among whatsoever things, vanishes in a higher unity in which it is based; that all contradictions, so called, are but differences; that all differences are of degree; that all degrees are of a common kind; that unbroken continuity is of the essence of being; and that we are literally in the midst of an *infinite*, to perceive the existence of which is the utmost we can attain. Without the *same* as a basis, how could strife occur? Strife presupposes something to be striven about; and in this common topic, the same for both parties, the differences merge. From the hardest contradiction to the tenderest diversity of verbiage differences evaporate, *yes* and *no* agree at least in being assertions,—a denial of a statement is but another mode of stating the same, contradiction can only occur of the same thing, all opinions are thus synonyms, are synonymous, are the same. But the same phrase by difference of emphasis is two, and here again difference and no-difference merge in one. It is impossible to convey an idea of the torrential character of the identification of opposites as it streams through the mind in this experience. I have sheet after sheet of phrases dictated or written during the intoxication, which to the sober reader seem meaningless drivel, but which at the moment of transcribing were fused in the fire of infinite rationality. God and devil, good and evil, life and death, I and thou, sober and drunk, matter and form, black and white, quantity and quality, shiver of ecstasy and shudder of horror,

vomiting and swallowing, inspiration and expiration, fate and reason, great and small, extent and intent, joke and earnest, tragic and comic, and fifty other contrasts figure in these pages in the same monotonous way. The mind saw how each term *belonged* to its contrast through a knife-edge moment of transition which *it* effected, and which, perennial and eternal, was the *nunc stans* of life. The thought of mutual implication of the parts in the bare form of a judgment of opposition, as "nothing—but," "no more—than," "only—if," &c., &c., produced a perfect delirium of theoretic rapture. And at last, when definite ideas to work on came slowly, the mind went through the mere *form* of recognising sameness in identity by contrasting the same word with itself, differently emphasised, or shorn of its initial letter. Let me transcribe a few sentences.

What's mistake but a kind of take?

What's nausea but a kind of -ausea?

Sober, drunk, -unk, astonishment.

Everything can become the subject of criticism—how criticise without something to criticise?

Agreement—disagreement!!

Emotion—motion!!!

Die away from, *from*, die away (without the *from*).

Reconciliation of opposites; sober, drunk, all the same!

Good and evil reconciled in a laugh!

It escapes, it escapes!

But—

What escapes, *WHAT* escapes?

Emphasis, emphasis, there must be some emphasis in order for there to be a phasis.

No verbiage can give it, because the verbiage is *other*.

Incoherent, coherent—same.

And it fades! And it's infinite! AND it's infinite!

If it wasn't *going*, why should you hold on to it?

Don't you see the difference, don't you see the identity?

Constantly opposites united!

The same me telling you to write and not to write!

Extreme—extreme, extreme! Within the *extensity* that "extreme" contains is contained the "*extreme*" of *intensity*.

Something, and *other* than that thing!

Intoxication, and *otherness* than intoxication.

Every attempt at betterment,—every attempt at otherment,—is a —.

It fades forever and forever as we move.

There *is* a reconciliation!

Reconciliation—*reconciliation*!

By God, how that hurts! By God, how it *doesn't* hurt! Reconciliation of two extremes.

By George, nothing but othing!

That sounds like nonsense, but it is pure *onsense*!

Thought deeper than speech —!

Medical school; divinity school, *school*! SCHOOL! Oh my God, oh God, oh God!

There are no differences but differences of degree between different degrees of difference and no difference. &c., &c., &c.

The last phrase has the true hegelian ring, being in fact a regular *sich als sich auf sich selbst beziehende Negativität*. And true Hegelians will *überhaupt* be able to read between the lines and feel, at any rate, what possible ecstasies of cognitive emotion might have bathed these tattered fragments of thought when they were alive. But for the assurance of a

certain amount of respect for them, I should hardly have ventured to print what must be such caviare to the general.

But now comes the reverse of the medal. What is the principle of unity in all this monotonous rain of instances? Although I did not see it at first, I soon found that it was in each case nothing but the abstract *genus* of which the conflicting terms were opposite species. In other words, although the flood of ontologic *emotion* was hegelian through and through, the *ground* for it was nothing but the world-old principle that things are the same only so far and no farther than they *are* the same, or partake of a common nature—the principle that Hegel most tramples under foot. At the same time the rapture of beholding a process that was infinite changed, as the nature of the infinitude was realised by the mind, into a sense of a dreadful and ineluctable fate, with whose magnitude every finite effort is incommensurable and in the light of which whatever happens is indifferent. This instantaneous revulsion of mood from rapture to horror is, perhaps, the strongest emotion I have ever experienced. I got it repeatedly when the inhalation was continued long enough to produce incipient nausea, and I cannot but regard it as the normal and inevitable outcome of the intoxication, if sufficiently prolonged. A pessimistic fatalism, depth within depth of impotence and indifference, reason and silliness united, not in a higher synthesis, but in the fact that whichever you choose it's all one,—this is the upshot of a revelation that began so rosy bright.

Even when the process stops short of this ultimatum the reader will have noticed from the phrases quoted how often it ends by losing the clue. Something “fades,” “escapes,” and the feeling of insight is changed into an intense one of bewilderment, puzzle, confusion, astonishment. I know no more singular sensation than this intense bewilderment, with nothing particular left to be bewildered at, save the bewilderment itself. This seems the true *causa sui*, or “spirit become its own object”.

My conclusion is that the togetherness of things in a common world, the law of sharing, of which I have said so much, may, when perceived, engender a very powerful emotion; that Hegel was so unusually susceptible to this emotion throughout his life that its gratification became his supreme end and made him tolerably unscrupulous as to the means he employed; that *indifferentism* is the true outcome of every view of the world which makes infinity and continuity to be its essence, and that pessimistic or optimistic attitudes pertain to the mere accidental subjectivity of the moment; finally that the identification of contradictories, so far from being the self-developing process that Hegel supposes, is really a self-consuming process, passing from the less to the more abstract, and terminating either in a laugh at the ultimate nothingness or in a mood of vertiginous amazement at a meaningless infinity.

W. J.

III.—CAUSATION AND ITS ORGANIC CONDITIONS.

I.

ONE special mental state, one moment of particular consciousness makes up our Here and Now.

How then is this solitary ideal presence linked to the vast array of seemingly absent occurrences called the Past and the Future? How does the actual instant of conscious realisation form part of our assorted fund of personal experience?—of the great system of general knowledge?—of the solid and all-comprising fabric of nature?

To our understanding it seems unquestionable that an isolated conscious state, with no connexions beyond consciousness, cannot possibly exert any influence over events happening in or out of consciousness. If a particular mental state constituting in all our world the only immediate presence, and therefore the only conscious reality; if such an individual and exclusive actuality were indeed a self-sustaining existent, unrelated to a sphere of extra-conscious subsistence, then it would of necessity remain for ever single and unchanged. Itself a paramount reality, resting on no actuating foundation of unfelt existence, it alone would form the veritable substance of being, a disconnected and stationary presence in isolation and immutability evermore abiding.

But by its very presence and peculiar constitution a mental state seems, on the contrary, to summon up from somewhere another mental state, causing our Here and Now to be filled with an influx of new feeling, itself fading gradually away into mysterious latency.

Undeniably we are conscious of nothing but our present mental state. It is this our present mental state which makes up our consciousness all in all. Undeniably the contents of this mental presence are constantly changing, for we are constantly becoming aware of something different.

What is it then that causes the change?

Is there productive efficacy in the mental states as such? Do we possess in the existence of our mental presence that ultimate, self-evolving entity, in whose substantial permanence philosophic imagination has so often sought refuge against the perpetual flow of perishing events? Or is it, perchance, by dint of some potency of its own intrinsic nature that the mental presence influences the hidden resources of unconscious being, compelling to arise therefrom that which constitutes its own change, and therewithal the entire composition of the succeed-

ing state into which it is transformed? Or is the mental presence, on the contrary, simply an effected manifestation, signifying in its various moods the phases of some process of actuation occurring within the domain of extra-conscious reality?

In fine, we wish to know whether in some way the mental presence forms an efficacious link in the concatenation of its own ever-changing states; or whether it is merely an effusion and index of actions performed altogether in a sphere of extra-mental subsistence?

This, in our present condition of knowledge, must certainly form the first of all questions concerning mental consistency and activity.

Mind is generally conceived as a steady and lasting power; in fact, as a substantial continuum, coextensive at least with all its consecutive manifestations. In truth, however, it is but a momentary flash revealing in its one instant of illumination more or less of nature. Another flash has to work a new enlightenment of its own, unassisted by the lustre of previous flashes.

To be faithful to nature we have unreservedly to acknowledge that we are immediately cognisant of nothing but the mental presence. It is only in the moment of actual conscious realisation that the world and our own being become known to us. Thus by "mentality" we can strictly mean only that which just now composes consciousness; and it is clearly a delusion to believe that former conscious states still retain their mental nature when they once have vanished from their mental presence. 'Memory' is no doubt a very convenient name for the stored-up Past, but so far as it is at all a mental property it signifies every time the veritable re-entrance of some constituent into the mental presence. There, and nowhere else, is this represented constituent recognised and greeted as part of one's belongings; belongings that in their non-conscious condition are being preserved for us somehow and somewhere out of mind.

We receive our mental being in conscious instants, each instant forming a totality in itself, and summing up the Past only by dint of actual representation within its own presence.

All this, when fully grasped by our understanding, appears astounding in the highest degree. Nevertheless it is even so. The constructive powers in nature, by infinite modifications and adaptations, have effectively contrived to condense all their diligently-gathered wealth of results into the one proud moment of triumphant outburst that constitutes our conscious Now.

This conscious Now, with whatever strength or weakness it may contain, is all we have of mind. If we wish to continue to attribute efficiency to it, it devolves upon us to conceive how

such an ideal presence can possess within itself creative or, at least, resuscitative power over something that does not really then and there exist for it, that indeed is wholly incommensurable with anything conscious. We have to imagine how an ideal presence can exert a compelling influence over a realm of unknowable subsistence, which we are led to hypostatise as lying somewhere outside our mental sphere inert and dormant in relation to our present feeling.

This much at all events is clear—that if the present mental state does not altogether originate the succeeding mental state, or does not transform its own self entirely into it, then the succeeding state must arise from some unconsciously existing matrix.

It is true there are many philosophers who maintain that the potential totality of mental states subsists above and beyond individual consciousness as a self-sustaining and self-changing power. But to the particular mental state actually present to us no such all-efficient potency is ever attributed. It is merely held by some thinkers that a present conscious state has somehow the capacity of rendering conscious again certain other states that are believed to have been mentally present before, but that are now resting as unconscious potentialities within the vast domain of temporary oblivion.

Now, even amidst our own so extremely complex states of mind, incessantly varying and crowding each other out of consciousness, we become aware that many feelings originate quite out of connexion with other feelings, emerge unsolicited by any previous mental state, directly from the dark womb of unconscious being. Indeed all our most vivid feelings, those we call sensations, are obviously thus mystically derived. Suddenly a new, irrelevant, unwilled, unlooked-for presence intrudes into consciousness, and is at once followed by a complex of feelings specifically related to itself.

Thus we are made forcibly aware that one set of feelings at least, and this the most elementary and conspicuous, becomes conscious without help from anything that can be found in the immediate province of mental actuality. In fact, the entire wealth of sensible things emerges into ideal presence by means absent from the sphere of consciousness and totally foreign to it. Some inscrutable power causes them to arise as felt existences, to enter the mental presence as sensorial¹ constituents. Is it not, therefore, probable that the active spring which raises other kinds of feeling into the mental presence has likewise to

¹ I use the term "sensorial" in preference to "sensuous" or "sensible" to designate that which mentally corresponds to what is physiologically called "sensory".

be sought for outside the province of mental actuality?—that, in truth, the mental presence as such has in no instance any influence over its succeeding states?

On close scrutiny it becomes indeed altogether inconceivable how a mental presence can come to exert any kind of control over the absent resources of unconscious being; how it can force any non-present feeling to relinquish its state of temporary extinction, to emanate anew from its secret matrix.

Unless the mental presence be self-created it must, in the fundamental case of sensations at all events, be sustained from moment to moment by extra-mental powers. That which brings it into consciousness, or rather which makes it conscious, which makes it in fact a mental presence, must unremittingly keep it so as long as it lasts. There is no *vis inertiae*, no self-persisting energy in an ideal presence. Throughout, it is but the luminous effluence of something unattainable by sense. And if this rigorous dependence on unconscious forces has to be conjectured with regard to the most vivid and distinct of all mental occurrences, how much more must such a sustaining foundation be postulated as hiding-place and quickening source of those potentialities that as fainter revivals of previous sensations so largely assist in making up our complex mental presence!

These obvious considerations render it evident that the mental presence in its entire sense-composition—if not self-created—must be wholly dependent for its origin and subsistence on an actuating substratum of unconscious forces.

This, surely, is a very momentous truth not only for Experientialism, but for Transcendentalism as well. However cautious our attitude, the recognition of the thorough new-production by extra-mental powers of all sense-derived contents of the mental presence will compel us further to concede that the same unconscious forces operate likewise the changes of feeling, the so-called transition from one mental state to another.

It is from the realm of unconsciousness that the mental presence with all its peculiar composition out of sense-derived feelings arises. It is from the realm of unconsciousness that it is from moment to moment sustained; therefore any change occurring in the mental presence must necessarily also be effected in the same prepotent realm of unconscious subsistence. Thus the entire sensorial contents of mind—actual sensations and remembered or represented ones, their whole arrangement within the mental presence, and everyone of their changes therein—all this is discovered to be in every respect the effect of extra-mental forces.

What efficiency, it may well be asked, is there then left for

mind proper after the demonstration of so complete a passive dependence on something that is not mind?

To readers who are not philosophically convinced that mind is made up of nothing but sensorial elements it will at once occur that everything which is commonly designated as apperceptive activity and will-power has been unnoticed in the above conception of the mental presence: attention, recognition, recollection, subsumption, sentiment of one's own identity, belief in reality external to oneself, emotional impulsion, voluntary actuation—all, in fact, that seems to emanate from the spontaneous resources of our unitary being, from the depths of that mysterious entity which we are wont to call our personality.

Much ingenuity has been bestowed on the attempt to explain away the veritable existence of the consolidating and unifying power with which we so firmly encounter the random rush of intruding sensations and ideas. Sensorial impressions and their derivatives, agglutinated through custom into more and more complex groups, were made to compose the entire fabric of mind. Nothing was discovered in mental activity but a grouping process centripetally worked.

An opposite school of philosophers detected on the contrary centrifugal operation everywhere; a synthetising power emanating from an inscrutable Ego and exerting its transcendent energy on passively received sense-material.

The Philosophy of Organisation, for which I am labouring to lay a solid foundation, seeks to account for both streams of activity. It finds them interpenetrating each other throughout, down to the most elementary sensation and up to the most compound thought, emotion, or volition.

It becomes, therefore, incumbent on us here to show that the centrifugally accruing constituents of the mental presence, which I will call the personal constituents, are as mental facts just as inefficacious as the sensorial constituents.

Here for once both schools are agreed that the personality, from which the mental constituents in question are thought to emanate, is not itself given in consciousness. To the one school our so-called personality appears to be nothing but the sum of all successive mental states; or at most all possible mental states conceived as in some way forming an aggregate of potentialities. The other school believes personality to be a super-conscious and permanent entity somehow underlying the temporary manifestation within the mental presence. In any case, the personal constituents of the mental presence, so far as they are at all acknowledged, are allowed to emerge into consciousness from some extra-conscious matrix. And as mind consists altogether in its own conscious presence they must

therefore be likewise completely dependent on non-mental forces. Their origin, subsistence, and mutations must be effected in a sphere of efficiency not itself mental.

However much it may have the appearance in consciousness that the apperceptive ingredients of mind exert, as such, a direct influence over its sensorial contents; or that its sensorial contents have, as such, a determining power over its province of actuation; it is clear that in reality no efficient interaction can take place between mental manifestations as such, between mere evanescent manifestations that have proved to be in their very essence unsubstantial effluences of merely phenomenal consistency.

In this light, our mental presence appears throughout but an iridescent refulgence on an impenetrable gloom of unconscious toil. But, perhaps, just on account of this its mere creatureship and utter passivity, it is all the better fit for faithfully revealing the secret doings of those powers of which it is an emanation. At all events the great problem of efficient interaction does not receive its solution from the examination of pure mentality, and has therefore to be worked at from a different standpoint. That which upholds consciousness and effects the changes therein lies obviously outside of mind. We desire to find some legitimate access to this hidden sphere of activity. If we fail we shall find ourselves inextricably involved in uncompromising phenomenism; nay, only blind faith can save us from downright nihilism. We shall then be far more confounded with regard to certitude of knowledge than Plato's inhabitants of the dark cave; for they had at least a steadfast and unitary mind wherewith to interpret the fleeting shadows; whereas without substantial support from powers outside consciousness our mind itself would consist of nothing but an incoherent sequence of perishing apparitions.

Hume very nearly landed us where we must at last arrive by taking the constituents of mind as the veritable operating realities in nature. But even Hume did not see to the end of the vista opened up by nominalistic idealism into nonentity. In order to derive from his particular and separate mental states some kind of orderly mental structure, he had to postulate a number of processes that evidently do not take place in mind proper, but are only conjectured by means of their results within the mental presence. To begin with: retentiveness and revivability are not really mental properties. Only when a retained impression has been actually revived does it become a mental fact. Where then has the revived fact subsisted during its absence from mental presence? A hypersensible region, where absent ideas may be dwelling in systematic constancy, is cer-

tainly not accessible to our mental view. Thus the orderly emergence into consciousness, the agglutination of mental facts, and the more or less necessary transition from one such fact to another, must evidently be operated in an extra-mental sphere. It is clear, if custom has anything to do with this orderly disposal, it cannot leave its trace on something that for ever vanishes, that, according to Hume himself, is a mere perishing existence annihilated by its absence from the mental presence.

The contiguity or sequence of two mental facts—now present in consciousness and the next moment utterly departed therefrom—can be held with any degree of plausibility to leave a trace on these mental facts only when the latter are believed to be merely temporarily withdrawn from consciousness, but still identically abiding somewhere in latency. Such a surmised subsistence in latency contains, however, virtually the acknowledgment of an unconscious non-mental matrix. A unitary and organised substratum must somehow underlie the orderly and systematised emergence of the particular mental facts. And in that case it would seem that, as mere affections of such a solidary matrix, the particular mental facts need not identically abide when absent from the mental presence. They may be simply re-issued as new-productions of identical activities. When, moreover, on account of their contiguity or succession, seemingly identical facts emerge into consciousness more forcibly and with a stronger bond of union between them than when first experienced, we may be certain that some process of intensification and amalgamation has been meanwhile accomplished within the issuing matrix, and that the enlivened and more firmly welded mental facts are new-productions of this developed state of the matrix.

There is indeed an impassable gulf between conscious and unconscious subsistence. That which because of its consciousness is called a mental fact cannot retain its mentality when departed from consciousness. It cannot subsist as a sensation that is not felt: a perception that is not perceived; a thought that is not cognised; a volition that is not desired. As this one actual mental fact, it has for ever perished. If its like is at any future time to become present again it has to be created anew, has to be entirely reproduced by the permanent substratum at its seat of unconscious operation.

Hume, in his helplessness to account from his sensorial premisses for the growing firmness and ultimate indissolubility of the mental bond and transition, felt compelled to postulate an "observation in the mind" and an "impression of the mind" thereby produced. This, of course, is to assume as pre-existing the very mental structure which he undertakes to weave out of

his separate sensations and ideas. Still not even with all this borrowed fund of unconscious powers could Hume succeed in putting together a mental structure. He could not even then amass a bare "heap of perceptions". His separate mental states would legitimately arrange themselves into nothing but an ever-dissolving view, an endless succession of agglutinated particulars, lapsing into nothingness as soon as they take their leave from consciousness.

We, even before borrowing from the transcendent wealth of unconsciousness, have recognised in mind something far more exalted than a thin thread of connected particulars gathered at intervals into a heap; or, more truly, merely the narrowest streak of consciousness on the verge of perishing particulars. To us the mental presence is a focal manifestation in which subjective and objective, presentative and representative feelings in all shades of vivacity and abstractedness are blending into the momentary realisation of a most compendious microcosm.

But all the more, because of our unfeignedly discovering everything knowable within the mental presence, do we find ourselves seriously entangled in the profoundest perplexity that has ever beset pondering mankind. We are seemingly aware of nothing but the mental presence, and surely the mental facts that compose this mental presence are altogether ephemeral. In mind we ourselves and everything else are wholly made up of a phantasmal play of ever-perishing and ever-recreated existences.

Where then have we and the other things our permanent being?

The inevitable nihilistic consequences of all creeds that rest on mind as the fundamental reality are only thinly concealed by an artifice which, when once fully exposed, must become transparent to all thinkers.

The chief fallacy that has governed and bewildered mental science is rendered at once patent when we realise that a series of mental states cannot be rightly regarded as a real mental existence, cannot be adequately collected into simultaneousness as an actual mental presence. The Past, as such, is irretrievably past, and cannot in this its irrevocable absence any longer count as equivalently forming part of the Present. Only what is now consciously here can in significant language be called a veritable mental existent, and surely it is by a most deluding figure of speech that absent mental possibilities are generally endowed with the same reality and significance as the true mental presence. There can be only one single mental presence; never a train of mental presences. The succession of mental states signifies only a progressive change within the mental presence

itself; a change, the superseded decrements of which have fallen one after another into the absent Past, and have been replaced by new integrant parts entering into the one moment of conscious realisation. The lapsed decrements of feeling can never be identically revived or remembered. Only by being immediately or at some future time newly reproduced as constituents of the actual mental presence do they seem to be thus revived; either vividly through complete re-instatement, or faintly through partial renovation, or representatively through signs.

What has to be chiefly explained in mental science is not so much how the world becomes revealed to us by the natural clinging-together of successive mental states; or by our own orderly putting-together of random sense-material; or by the conscious referring of the perishing manifold to an ideal realm of changeless significance. Mental science has above all to explain how the world becomes actually revealed to us in the one moment of conscious realisation. There is no mind but even Now. Mentally considered the Past is for ever gone. It remains consciously our own only through actual *re*-presentation. And so is the Future with us solely as momentary prescience.

If, nevertheless, the Present seems to us enduring and all-efficient, it is surely not by dint of any virtue of its own, not by dint of any control it is having over the springs of existence. Our mental presence is entirely given to us, is throughout the product of extra-mental powers.

At first sight it may appear passing strange that we, who know our being and its life solely in the sphere of ideal realisation, should nevertheless receive this our seemingly supreme existence and only knowledge as a kind of magic reflex from sources of efficiency other and deeper than any mental presence; strange that the enduring moment of mental actuality, which makes up our whole individual realisation of whatever there may be in the world, should thus in passivity and ineffectiveness obtain as a gratuity from unknowable repositories of power all its singular vivacity and inspiration so intensely significant, so impressively real and all-important to us.

Yet in some of its aspects this truth of otherness within the mental presence forms part of our strongest convictions. Indeed, with regard to those special mental states called percepts, it is to us the most irresistible of all truths. We are unhesitatingly certain that it is a foreign non-mental existence that occupies our conscious moment; and it requires much afterthought to persuade ourselves that, notwithstanding this forcible semblance of external reality, the feeling of the foreign thing was like all other feelings also immediately only a mentally

fashioned presence. But even the philosophic recollection of this evident state of things will not suffice to make us relinquish our implicit faith in an efficient outside source of the mental image. We deliberately hypostatise a sense-compelling thing-in-itself, dwelling persistently in a sphere external to consciousness. Without this realistic assumption and its all but unfailing confirmation through sensory channels, our actions would be meaningless. We should not move like beings guided by a world of foreign helps and hindrances, but like madmen wildly and incoherently acting in obedience to random impulses from within.

And not only do we regard the complex fabric of our perceptions and their derivatives as signifying an extra-mental system of things; we endow in a similar manner the personal constituents of mind with a transcendent meaning and reality, holding them naturally to be but special manifestations of that one permanent entity which constitutes our unitary being.

To some it may still appear that, by thus postulating an efficient fund of unconscious powers as the operating substratum of the mental presence, we are overreaching the rightful limits of conjecture. But only one alternative otherwise remains. If mental states are existences uncaused by anything not themselves, then we have before us the miracle of miracles—a creation from nothing.

We awake from a state of ordinary unconsciousness. Our mental presence becomes filled with contents. Where do these mental existences come from? If not produced by forces outside consciousness they must needs be self-created, must have arisen unconvened from inanity. Our understanding, otherwise so submissive, stubbornly recoils from such an all-annihilating assumption. Not, indeed, that our thought need feel utterly prostrated at all the implications of the nihilistic ultimatum of ancient and modern philosophy. In one sense, everything we know must have once been created out of nothing. And even now we can quite well conceive how something that has been nothing to us before, may actually begin, for the very first time in nature, to manifest itself as a mental presence; may be by force of some newly-acquired faculty of our being, may be by force of some new combination of other unconscious powers. Thus everything that we now find within the mental presence must originally, when it first appeared there, have accrued to it out of nothingness. But, in framing this conception of a new creation of something now felt out of nothing ever felt before, we are drawing on an unlimited store of extra-conscious reality, which we imagine somehow pre-existing as an original source of power.

It is quite otherwise in assuming that a mental presence is self-creating and self-changing. Here our most productive imagination fails to supply an efficient background of existence from which to elicit the actual mental appearance, and from which then to effect its successive modifications in consciousness. Self-caused, self-supported, self-moving, the momentary mental presence would form the sole reality in existence, signifying nothing beyond itself. This, it need hardly be said, is hopeless Nihilism.

Being thus inevitably forced to admit, either a creation out of nothing, which occurrence cannot be even philosophically conceived, or causation by non-mental powers, which is already naturally presupposed in every cognition; who can wonder if regardless of doctrinal consequences, we feel bound uncompromisingly to adopt the latter alternative? We, therefore, recognise as groundwork of all knowledge the truth, that the mental presence is *in toto* the effect of non-mental powers, of such powers as, according to manifold evidence, are forming its unconscious potentiality.

It has been the custom to condense in imagination the potential totality of mental facts into the compass of a single mental presence, and then with more or less plausibility to make pretence at evolving from the all-comprising entity thus hypostatized any possible configuration or train of mental states. But by this evident misconstruction our shallow human penetration is unwittingly striving to truncate the substance of existence, to despoil our mystic being of all its transcendent bearings, of all its empyrean influx of treasure. And this prevalent freak of inverted understanding constitutes by no means a harmless theoretical error, but influences deeply our actual destinies. For the sake of our future welfare as an organic unity of human beings, it behoves us earnestly to seek an unbiassed insight into the veritable seat and fulcrum of the actuating powers.

Of late it has become the growing tendency of almost all philosophical schools to dissolve in some way or other the entire fabric of the universe into mere mental subsistence. Experimentalists as well as Transcendentalists are alike zealous to show how the world at large consists of nothing but mind: the former attempting to put everything together out of mental elements; the latter believing that they can derive all particular phenomena from an ideal totality. Even scientists, not long ago materialistically inclined, are now indulging their imagination in the construction of a Monism, in which all reality is to be built up of genuine elements of feeling.

Mind, which in this connexion means the manifold manifestations of its complete potential range, is fancied to be composed

of nothing but units of sensation variously grouped. This being all there is of the inner aspect, it is believed that this subjective state of existence represents somehow adequately the inside of what appears otherwise to us as objective existence: the resting nerve-particle being itself the potential sense-element; the vibrating nerve-particle, the actual sense-element. Thus, to every outer experience in nature, there will likewise correspond identical with it an inner experience. But as all our immediate knowledge of nature is sense-composed, we may safely conclude that sense-elements as such constitute the only true and ultimate reality.

Or the train of thought may run thus: On final analysis the world seems to resolve itself without remainder into a complex of primary sensations and motions. But as motions, together with their manifesting media, time and space, are evidently themselves formed only by a definite grouping of sense-elements, it is clear that sense-elements are the ultimate world-material.

After what has been here previously established, no further examination of these sense-constructed cosmologies is required. From whatever point of view anything within the mental presence is taken for an original and elemental reality, an absolute creation out of nothing has therewithal to be assumed, and science of any kind is rendered nugatory.

In truth, however, we are in possession of many sciences, and we are merely anxious to learn on what foundation all this wealth of knowledge rests, hoping that by a well-directed bearing towards the knowledge-giving powers we may henceforth steer better our aim-hidden course.

To sum up: I think that, in consequence of our demonstration of the total dependence of the mental presence on extra-mental forces, we are justified in designating as the only true pivot on which the entire theory of knowledge may securely rest and turn, the truth—that all mental states are effects and nothing but effects; that they are rigorously caused in every distinguishable particular of their respective constitutions; and that every slightest change, happening in the field of mental vision and discrimination, is likewise strictly caused by non-mental occurrences.

II.

We have now gained a firm standpoint, from which we shall find ourselves enabled to explore, with much avoidance of confusion, the nature and complications of Causation. We were led to acknowledge that all phenomena of consciousness are effects

of unconscious causes, that they are throughout the expression of non-mental powers. Nothing but effects are present in mind. The causes of these effects are always only inferred, assumed, hypostatised, or however we may name the conviction of transcendent meaning which accompanies all kinds of feeling; connecting them invariably with the system of potentialities which we call our personality, and connecting special kinds of them moreover with the other system of potentialities which we call the external world.

The fundamental significance of causation is, therefore, clearly the reference of manifest conscious effects to hidden unconscious causes as their originating and sustaining source.

We have next to consider how it comes that from sundry kinds of effects in consciousness we happen naturally to infer specific corresponding causes outside consciousness.

First of all we are immediately and steadfastly aware that our percepts at least are not self-originating and self-sustaining; that they are on the contrary compelled by influences foreign to ourselves.¹ Our sensibility finds itself impressed in a specific manner by agencies evidently not belonging to our own being. For, the more we exert our individual activities upon the imposed presence, the more attentive and scrutinising our attitude towards it, the more do we become convinced that an outside power is playing upon us. Possessing as proof of this nothing but the compelled configuration of feelings, it is very natural that this should stand with us for the affecting powers themselves. It is their adequate signature and sole manifestation of existence. We, therefore, unhesitatingly take the specific configuration of aroused feelings directly to signify a specific combination of outside powers, and our thoughts and actions shape themselves accordingly.

If we are deceived therein, if in some way our percepts are anomalously compelled by conditions inherent in ourselves, and do thus persist without our wish and will, nay, stubbornly in opposition to it, then we are in imminent danger of losing our hold on reality, and of acting out in life the consequences of our perceptual delusions.

There is indeed no other way of testing existences foreign to ourselves than by ascertaining the range of feelings rigorously compelled by them. In such a process of sensitive testing, systematically carried out, consists essentially the scientific in-

¹ Not to complicate matters too much at this stage of our inquiry, I purposely leave out of account our own body, as perceived through the ordinary sensory channels. In this aspect it is, however, an external existence to our consciousness, producing therein specific effects like any other externality.

vestigation of externalities. In examining the influence which one foreign existence may exert upon another, we are always interposing our own sensibility as testing medium. It is altogether within our own sensorial focus, through the medium of awakened perceptions, that the examined foreign existences disclose the similarities and differences of their affecting powers and the changes which they induce in each other's constitutions. We are therefore committing a grave philosophical error when we believe that we can directly discern the changes wrought by one body upon another. The one body is immediately nothing but our percept, and the other body is likewise only our own percept. Any kind of change occurring can thus be primarily detected only within the sole existences present, *i.e.*, the perceptions, and can be referred to foreign substances only in the same way that the perceptions themselves are referred to foreign existences.

Changes of foreign existences, as regards the intrinsic position of their own constituent parts, or as regards their relative position towards other existences, are solely revealed and evidenced by specific perceptual phenomena in the observer, and are not a whit less thus subjectively revealed than the static condition of the foreign existences. I have indeed never been able to understand why motion, which is merely shifting sensation, should so persistently be construed into a world diametrically opposed to sensation; motion being held to form the outside or objective aspect of nature, sensation its inside or subjective aspect. Surely the powers that compel the configurations of sensation will be also efficient to compel their shiftings. Perception in repose and perception in motion rest on exactly the same foundation. They are both conscious phenomena, in every respect the product of unconscious powers.

Of course, I can quite well see how this giddy abyss between sensation and motion, so impassable and bewildering to most minds, is conjured up in imagination. In contemplating the production of sensations, we fancy that a given sensation, *i.e.*, the subjective feeling, is caused by a motion of the affecting externality, or more directly by a motion of the neural substratum; that, in fact, the motion outside of us is the stimulus, and the motion in the neural substratum the immediate cause of our sensation. Or, if we are so-called Monists, we fancy that the motion of the neural substratum is objectively the same thing as the subjective sensation; that the sensation is a phenomenon concomitant with the neural motion, and somehow identical with it. Only we can then not understand how it happens that we find ourselves at one time on the subjective, at another time on the objective side of the phenomenon.

Now, to render the ominous mistakes involved in these suppositions transparent to all thinkers, it is only necessary to place ourselves in the correct scientific attitude. We have just seen that all existences foreign to ourselves, together with their changes and the changes and motions seemingly impressed by one such existence upon another, are in reality, one and all, appearances changing and moving within our own consciousness ; are, in fact, throughout our own perceptions. This understood, let us take, for example, as the one foreign existence a vibrating string, and as the other foreign existence a living organism. We want to know how the vibrating string affects the living organism. We perceive the string and its vibrations, and we perceive also the living organism and certain vibrations or molecular motions set up in its auditory tract. This is all that immediate consciousness could possibly reveal to us under an ever so extended range of visual power. Most evidently, in this case also, the observed vibrating string and the observed living organism with its auditory tract put in functional motion are in every respect our own perceptions. It is nothing but a complex of our own perceptions that stands for the vibrating string, and it is nothing but a complex of our own perceptions that stands for the organism and the motions of its auditory tract. As regards the outside powers that compel these perceptions and their changes to arise within our mental presence, we are as completely in the dark as with regard to any kind of power. We are conscious of nothing but our own mental presence. All the rest is inference therefrom.

My ears are stopped up. I am watching a living brain, and presently I discern specific motions set going in some particular part of it. I look round and perceive a vibrating string. All these appearances are clearly nothing but perceptions within my own mental presence. Nevertheless, true to inbred and naturalised habit, I conclude that the vibrating string as a foreign existence is the cause or determining condition of the motion of the brain as a foreign existence. In truth, however, I know absolutely nothing of foreign existences as such, neither of an externally vibrating string, nor of an externally moving brain. Both vibrating string and moving brain are my intrinsic perceptions, and the foreign existences inferred as compelling causes of these my perceptions are altogether unknowable to me.

I now further, in a roundabout way, ascertain that, corresponding to this my perception of an auditory tract in motion, the foreign existence, which I infer as compelling this my special perception together with a perception of an entire living organism, is itself experiencing a series of quite different perceptions of so-called sounds. I thereupon open my own ears,

and at once also hear sounds exactly like those described to me by the inferred foreign being who had impressed me with the perception of a brain in functional motion. These sounds are my *auditory* perceptions. The vibrating string is my *visual* perception. I philosophically conclude that both auditory and visual perceptions are compelled by the same unknown foreign existence. I do *not* conclude that the vibrating string *i.e.*, my visual perception, is the cause of my auditory perceptions, *i.e.*, the sounds.

In all this there is no trace of dualism, neither between matter and mind, nor between motion and sensation, nor between mental fact and its unknown cause. Everything here is mentally fashioned, but the mental states themselves are taken for the affections of a substantial entity that is not mental, that is only known through these its phenomenal and ephemeral displays. Brain, string, vibrations, sounds are all alike perceptions of a human being, all alike effects of unconscious powers. Every existence here present to consciousness is essentially of the same kind. The sounds I hear are not more sensorial than the brain I perceive, or the vibrating string present in my mind. The brain I perceive or the vibrating string is not more material than the sounds I hear. Matter in this sense is only a name for the inferred permanence and resistibility of the unknown sense-compelling causes; motion, a name for their activity. Motion, permanence, and resistibility represent to me special states of unconscious powers, but solely as externalised effects within my own mental presence. There is in reality no dual or two-sided aspect, no concave and convex appearance of one and the same entity, no radical contrast between subject and object. It needs no standing miracle, no supernaturally pre-established harmony to bring about an inter-communication between mind and matter, between the world of thought and the world of extension. All things of which we are conscious are facts within the one mental presence of a human being. The task is to gain a full knowledge of this human being and its all-revealing mental presence.

This end in view, we must never forget that body and mind are not in any sense the same entity, much less two different entities. Body is immediately only a mental appearance. Mind a product or effect of unconscious and unknowable powers. That peculiar composition of unconscious forces of which mind is the direct effect, is by no means coincident with that entire composition of unconscious forces that compels the perception of our body. Or more intelligibly expressed: That which in an observer compels the perception of a human nervous system forms only a definite part of that which com-

pels the perception of an entire human body; and it is in what we call the nervous system that circumstantial evidence leads us to place exclusively the manifestations of the mental presence.

Nor is it true that a neural vibration, tremor, or unit of nerve-motion of any kind constitutes the objective aspect of the identical existence that subjectively viewed is forming a unit of feeling. A neural occurrence, together with its substratum, is throughout only a perception within the observer's mental presence, and is therefore of essentially the same nature as the sensation experienced by the observed individual. Both mental facts—my perception of a neural tremor, and your corresponding sensorial affection; or, to put the matter more definitely, my perception of the functioning particles of corpora quadrigemina which I am convinced are forming part of your being, and your own corresponding visual perception—are manifestations of one and the same kind, though occurring in two different individuals. They are both perceptions, and both the product of unconscious powers. Only your visual perception is *directly* the effect of the same unconscious forces which in a much more roundabout way are compelling within my mental presence the perception of functioning corpora quadrigemina. And it is in a still more roundabout way that I become at all aware that you yourself are also experiencing peculiar feelings. Indeed, only through most indirect signs is the fact of your mental experience revealed to me within my mental presence.¹

¹ In scientific imagination we may legitimately go so far as to form the idea of one sense experiencing the movements referred to the substratum of another sense. We may imagine ourselves having the visual or tactile perception of our own auditory tract and its functional motions. But we are making a momentous mistake when we think we can imagine ourselves as experiencing a special perception, and at the same time watching, by means of this very same perception, the substratum from which it emerges. If it were possible through the right eye to perceive, for instance, a tree, and through the left eye to perceive the right optic tract and its functional motions set going by the foreign existence, then the visual experience through the left eye, *viz.*, the experience of another optic tract in function, would be produced by means of intervening contrivances in just such a roundabout way as the experience of the right optic tract, *viz.*, the perception of a tree. Different specific combinations of unconscious and unknowable powers are here each effecting its own specific perception. How then can we rightfully imagine the combination of unconscious powers that are effecting the perception of a tree to be also effecting at the same time and through the same operation the perception of an optic tract in function?

Could, finally, by the aid of any kind of contrivance, the perception of an optic tract be realised within the mental presence through its own agency, then—under this extreme supposition—the perceived optic tract with its manifesting conditions would be the sole mental existence present.

So far then as immediate consciousness is concerned, there exists indeed nothing but one single mental presence into which all particular feelings and all configurations or combinations of mental states are entering as constituent parts. This unique all-comprising consciousness is that of the perceiving and contemplating subject at the time being. It is true each of us is convinced that a multitude of other beings like ourselves are consciously existing and in possession of very similar mental faculties. But their consciousness also is a tenure in solitude. Its direct contents—the mental facts themselves—can as such never be shared by any other consciousness.

My finding out that under certain conditions your mental presence and the mental presence of others are filled at the same time with a perception singularly like the one now present to my own mind, does not entitle me to conclude that it is the same physical fact or actual phenomenon which we are all alike perceiving, but merely that the same unconscious powers which

We should not have a functioning optic tract, and also my perception of it; but only my perception of it as effected by a peculiar combination of unconscious powers. And this combination of unconscious powers would necessarily include the intervening contrivances that conveyed the impression of the optic tract to the sensory inlet. Under this combination the optic tract would be perceived in function, but the function would be set going as usual through the proper sensory channel, and would represent in consciousness the influence of the foreign existences thus acting upon our sensibility. It would never, and in no way represent the *immediate* activity of what we hypostatistically call the neural substratum. That is to say, the functioning substratum as perceived by an *observing* subject, and the immediate mental effect of the function in the *observed* subject, are two totally different facts that can never be identified. Nevertheless this false identification is generally assumed as the very foundation of Psychophysics and Psychophysical Monism. The true identification of disparate appearances in nature lies in the fact that all kinds of phenomena, whether at rest or in motion, are alike realised within the one unitary mental presence of an identical human being.

It does not avail to maintain that we can accomplish in thought the identification of Psychophysical Monism. Thought, to be correct, has to represent the true conditions of being. It is only by rightly interpreting the mental presence, so that it will show itself verification-proof, that thought becomes at all valid. Therefore the perception of a neural occurrence can never be made identical through thought with its conditions of production.

However obvious when once rightly conceived, it is quite impossible to convey in words more than indications how a reader may realise in his own mind these rather complicated scientific visions. It requires much perseverance to view, for the first time correctly, an actuated system of appearances even when presented to the bodily eye. When studying striped muscle in living activity it took the present writer, who is well practised in such work, more than a month of daily labour from morning till night clearly to fix the mere statical aspect of fibres. Not till then was he able, intelligently, to follow the phenomena of functional change.

I infer as causes of my own perception are producing like effects in other individuals. The non-appreciation of this truth has caused endless confusion in philosophical discussions. We become, however, aware of the distinct creation of phenomenal existences in every separate consciousness, and of their constant new-creation from moment to moment in each consciousness, when these phenomenal existences are recognised to be produced by the unsubstantial play of ephemeral causes. It does not require much reflection to become convinced that every observer perceives a rainbow of his own, and that moreover it is from moment to moment a new rainbow that appears to each. Here phenomenal repose or statical subsistence is in the making only; it is not self-rounded and flawless as elsewhere.

But all phenomena are in truth, as appearances and as surmised entities, thus dynamically and spectrally constituted. The mental presence is the all-representing, all-condensing phenomenon *κατ' ἐξοχήν*. Into it enters the complete universe microcosmically spectred, and here it securely rests on the ever-renewed foil of personal identity. (See MIND No. XXIII.)

One more complication remains to be noticed—the perception of our own body. After what has been already stated it cannot be difficult to understand that, so far as we become aware of our own body through the common sensory channels, we stand in the same relation to it as any other observer. It is an object seen and felt, *i.e.*, a perception within our mental presence referable to the compelling influences of unconscious and unknowable powers in the same manner as any other perception.

If, besides, we find within our mental presence feelings and combinations of feelings different from those compelled by any other external existence; feelings which we have reason, notwithstanding, to refer to efficiencies inherent in the same entity we perceive as our body, then we have to construct from these particular constituents of the mental presence a special science, a science of facts accruing to the mental presence through channels different from those through which it receives its knowledge of other externalities. This peculiar class of mental ingredients may differ widely from those other mental ingredients that are acquired through the common sensory inlets; but as all mental facts, however disparate, are found to blend into one individual microcosm, there can obtain at bottom no very radical contrast between any of the constituents of a unitary consciousness thus composed. We cannot possibly discover among them a distinction sufficiently trenchant to justify us in construing a two-sided aspect of nature.

We have under all phases of consciousness to be mindful that we are immediately aware of nothing but a marvellously com-

plicated, ever-changing mental presence. Under the supposition that nothing therein is uncaused, we are striving, in explanation of the phenomenal display, to construct a consistent system of hypostatised powers as agents operating the mental appearances and their mutations. These powers we can only designate by their adequate mental signatures or effects. This we are in the habit of practically doing through mere natural impulse. It is, however, the office of science to perform the task accurately and exhaustively. We know nothing but mental facts representing the unconscious powers that cause them. But the mental presence in which everything is revealed proves itself to be the varying affection of an identically enduring being of non-mental consistency.

Working as we are all doing at one common science of truth, thinkers of all schools are entreated earnestly to weigh the simple solution here offered by the Philosophy of Organisation to one of the most ancient and obdurate perplexities of human thought. We cannot hope consciously and systematically to direct life so as to bring about a fulfilment in reality of our ideal aspirations, before having positively ascertained the true relation of our mind to our body and to the other non-mental powers of nature.

It would seem as if Idealism, logically followed up, ought to lead to results similar to those here expounded, ought intelligibly to resolve all natural phenomena into appearances within the mental presence. But Idealism never came to recognise the mental presence. It did not become aware that the veritable actuality of mind is to be found only in the momentary realising and focussing of potentialities—potentialities that are abiding within the specific combinations of its inciting and producing causes.

Nominalistic Idealism, moreover, attempted to build up the cosmos figured in feeling out of mere association of elementary mental states signifying nothing beyond themselves. It thus necessarily failed to discover the underlying system of permanent potentialities, of which the particular feelings are but so many sounded notes. It found itself incapable of explaining even the sense-derived world, the existence of which it admitted. Much less was it capable of explaining the world of personality, which in conformity with its premisses it had to deny.

Transcendental Idealism, on the contrary, raised the underlying system of permanent potentialities into the sphere of actual mentality, and was thus debarred from the possibility of establishing an efficient intercommunication with non-mental powers. Thus the world appearing, nay forcing itself into perception, remained utterly unassimilable to it, in spite of the

most audacious dialectic jugglery of its votaries; and even Kant's strenuous effort of reconciliation did not succeed in establishing a genuine and fruitful intercommunication between the intelligible and the sensible world.

Phenomenism by reflectively utilising the mental manifestations ready-made, and by seemingly abstaining from hypostatising, professes to build up the universe out of self-sustaining mental facts. In truth, however, it postulates the entire wealth of absent or latent mentality, and is thus enabled with some plausibility to perform phantasmagorically or unsubstantially what can be rightly done only with reference to an enduring system of substantial powers. It tacitly presupposes the all-comprising logical totality in which the whole potentiality of the phenomenal world is reposing, and then forces it to pass through the scattering and agitating prism of perceptibility. Let, however, the import of the "mental presence" be realised, and its explanation will prove fatal to this phantasmal cosmology.

It will be presently shown, on the other hand, what explanatory strength in this respect is contained in the Philosophy of Organisation.

It would not be difficult to show why all systems of thought have been either abortive or dualistic. It is, however, quite impossible here in so confined a space to discuss the shortcomings and sundry dualistic turns in even the leading philosophies. I will only mention once more in general that Psychophysical Monism, which expressly proclaims as its foundation the identity of the molecular motions of the functioning neural substratum with the mental state accompanying the same, has obviously seized on a wrong assumption. Every mental state presents indeed a physical aspect, but only to the perception of an observer or outsider. Or, dogmatically expressed, that which immediately causes the mental state in the *observed* subject compels also much more indirectly through intervening media and organic stimulation an entirely different mental state in the *observing* subject. This distinction forms by no means an over-subtle and useless discrimination, but is, on the contrary, of fundamental importance to physical as well as to psychical science. The fact that ever so primordial an appearance of matter or motion is, and always must be, a perception within the immensely complex mental focus of a living being, itself formed by the cumulatively condensed results of highest organisation—this plain fact excludes for evermore the possibility of correctly imagining a primitive element of extra-mental subsistence, an atom of any kind. It renders also intelligible the accruing unto the mental presence of modifi-

cations of existence previously beyond the ken of sensibility. And it affords the philosophical justification for assuming in explanation of sensible phenomena, under a partly sensible guise, efficient agents, such as the cosmic ether, which in reality are altogether extra-sensible.

The uniform reduction of all phenomena of nature to constituents of one and the same mental presence of an enduring entity that has power to compel within this mental presence the perception of its own self as an organised unity of living energies—this scientifically grounded conception opens a truly monistic view in which all ancient dualisms of philosophy are satisfactorily reconciled. Body and mind, matter and force, motion and sensation, subject and object, find all their proper place and explanation in this organic system of effect- or phenomena-producing causes.

As regards our special problem of Causation we are now in a position definitely to recognise why it is that we have no other way of unravelling its complications than by interpretation of phenomenal effects within our own mental presence. Everything beyond must necessarily be inference. We have therefore to place ourselves in favourable experimental attitudes towards the sense-compelling powers, in order to find out through the medium of our sensibilities the special conditions of the interactions of those powers, and in order to find out above all the immediate conditions under which the mental presence itself is created and operated.

EDMUND MONTGOMERY.

(To be continued.)

IV.—THE RELATION OF GREEK PHILOSOPHY TO MODERN THOUGHT.

II.

THE author of the *Leviathan* has sometimes been represented as one who carried the Baconian Method into politics and prepared the way for its more thorough application to psychology by Locke. But this view, which regards the three great leaders of English philosophy in the seventeenth century as successive links in a connected series, is a misapprehension of history which could only have arisen through leaving out of account the contemporary development of Continental speculation, and through the inveterate habit of looking on the modern distinction between empiricism and transcendentalism as a fundamental antithesis dividing the philosophers of every epoch into two opposing schools. The truth is that, if the three writers just mentioned agree in deriving knowledge solely from experience, they agree in nothing else; and that their unanimity on this one point does not amount to much, will be evident if we consider what each understood by the notion in question. With Bacon, experience was the negation of mere authority, whether taking the form of natural prejudice, of individual prepossession, of hollow phrases, or of established systems. The question how we come by that knowledge which all agree to be the most certain, is left untouched in his logic; either of the current answers would have suited his system equally well; nor is there any reason for believing that he would have sided with Mill rather than with Kant respecting the origin of mathematical axioms. With Locke, experience meant the analysis of notions and judgments into the simple data of sense and self-consciousness; and the experientialists of the present day are beyond all doubt his disciples; but the parentage of his philosophy, so far as it is simply a denial of innate ideas, must be sought, not in the *Novum Organum*, nor in any other modern work, but in the old *Organon* of Aristotle, or in the comments of the Schoolmen who followed Aristotle in protesting against the Platonism of their time, just as Locke protested against the Platonism of Descartes and Malebranche. The experience of Hobbes differs both in origin and application from either of these. With him, sensible impressions are not a court of appeal against traditional judgments, nor yet are they the ultimate elements into which all ideas may be analysed; they are the channels through which pulsating movements are conveyed into the mind, and these movements, again, represent the action of mechanical forces or

the will of a paramount authority. And he holds this doctrine, partly as a logical consequence of his materialism, partly as a safeguard against the theological pretensions which, in his opinion, are a constant threat to social order. The authority of the political sovereign is menaced on the one hand by Papal infallibility, and on the other by rebellious subjects putting forward a claim to supernatural inspiration. To the Pope, Hobbes says: "You are violating the law of nature by professing to derive from God what is really given only by the consent of men, and can only be given by them to their temporal head—the right to impose a particular religion". To the Puritan he says: "Your inward illumination is a superstitious dream, and you have no right to use it as a pretext for breaking the king's peace. Religion has really nothing to do with the supernatural; it is only a particular way of inculcating obedience to the natural conditions of social union."

Again, Hobbes differs wholly from Bacon in the deductive character of his method. His logic is the old syllogistic system reorganised on the model of mathematical analysis. Like all the great thinkers of his time, he was a geometrician and a mechanical physicist, reasoning from general to particular propositions and descending from causes to effects.¹ His famous theory of a social contract is a rational construction, not a historical narrative. But though a mathematician, he shows no traces of Platonic influence. He is therefore all the more governed by Atomist and Stoic modes of thought. He treats human nature, single and associated, as Galileo and Descartes had treated motion and space. Like them, too, he finds himself in constant antagonism to Aristotle. The description of man as a social animal is disdainfully rejected, and the political union resolved into an equilibrium of many opposing wills maintained by violent pressure from without. In ethics, no less than in physics, we find attractive forces replaced by mechanical impacts.

While the analysis of Hobbes goes much deeper than Aristotle's, the grasp of his reconstructive synthesis is wider and stronger in at least an equal proportion. Recognising the good of the whole as the supreme rule of conduct, he gives a new interpretation to the particular virtues, and disposes of the theory which made them a mean between two extremes no less effectually than his contemporaries had disposed of the same theory in its application to the elementary constitution of matter. And just as they were aided in their revolt against Aristotle by the

¹ This is well brought out in a remarkable series of articles on the Philosophy of Hobbes recently published by Tönnies in the *Vierteljahrsschrift für wissenschaftliche Philosophie*.

revival of other Greek systems, so also was he. The identification of justice with public interest, though commonly attributed to Epicurus alone, was, like materialism, an idea shared by him with Stoicism, and was probably impressed on modern thought by the weight of their united authority. And when we find the philosopher of Malmesbury making public happiness consist in order and tranquillity, we cannot but think that this was a generalisation from the Stoic and Epicurean conceptions of individual happiness; for both embrace the same ideal of passionless repose.

On the other hand, this substitution of the social for the personal integer involves a corresponding change in the valuation of personal feelings as such. What the passions had been to later Greek philosophy, that the individual soul became to Hobbes, something essentially infinite and insatiable, whose desires grow as they are gratified, whose happiness, if such it can be called, is not a condition of stable repose but of perpetual movement and unrest. Here, again, the analogy between physics and ethics obtains. In both there was an original opposition between the idea of a limit and the idea of infinite expansion. In both the conflict was bequeathed by ancient to modern thought. Those who embraced both studies have always had a certain tendency to take the same side in each; but this tendency has been more distinctly marked in modern than in ancient systems. The successors of Aristotle, while falling back on an older cosmology, had retained his limiting method in their speculations on man. If he and Plato before him had imprisoned the formless and turbulent terrestrial elements within a uniform and eternal sphere of crystal, they imposed a similar restraint on the desires and emotions, confining them within a barrier of reason which, when once erected, could never be broken through. And if, before the Athenian school arose, there had been a physical philosophy of the infinite or, as its impugnors called it, the indefinite, there was, corresponding to it, a philosophy of the infinite or indefinite in ethics, represented, not indeed by professional moralists, but by rhetoricians and men of the world. Their ideal was not the contented man, but the popular orator or the despot who revels in the consciousness of power—the ability to satisfy his desires, whatever they may be. And the extreme consequence of this principle is drawn by Plato's Callicles when he declares that true happiness consists in nursing one's desires up to the highest point at which they can be freely indulged; while his ideal of character is the superior individual who sets at naught whatever restraints have been devised by a weak and timid majority to protect themselves against him.

The Greek love of balanced antithesis and circumscribing

form triumphed over the infinite in both fields; and although the ground won in physics was lost again for a time through a revival of old theories, this was because true Hellenism found its only congenial sphere in ethics, and there the philosophy of Plato continued to reign supreme. With Christianity, there came a certain inversion of parts. The external universe again became subjected to narrow limitations, and the *flammanitia mœnia mundi* beyond which Epicurus had dared to penetrate, were raised up once more and guarded by new terrors as an impassable barrier to thought. But infinity took refuge within the soul; and, while in this life a sterner self-control than even that of Stoicism was enjoined, perspectives of illimitable delight in another life were disclosed. Finally, at the Renaissance every barrier was simultaneously overthrown, and the accumulated energies of western civilisation expatiated over a field which, if it was vast in reality, was absolutely unbounded in imagination. Great as were the achievements of that age, its dreams were greater still; and what most excites our wonder in the works of its heroes is but the fragment of an unfinished whole. The ideal of life set up by Aristotle was, like his conception of the world, contradicted in every particular; and the relative positions assigned by him to act and power were precisely reversed. It has been shown how Shakespeare reflected the Platonism of his contemporaries: he reflected also the fierce outburst of their ambition, and in describing what they would dare, to possess solely sovereign power and masterdom or wear without corival all the dignities of honour, he borrowed almost the very words used by Euripides to express the feelings encouraged by some teachers of his time. The same spirit is exhibited a generation later in the dramas of Calderon and Corneille, before their thoughts were forced into a different channel by the stress of the Catholic reaction; while its last and highest manifestation is the sentiment of Milton's ruined archangel that to reign in hell is better than to serve in heaven. Thus, when Hobbes reduces all the passions to modes of the fundamental desire for power, he does but give the scientific theory of that which stands proclaimed in more thrilling accents by the noblest poetry of his age.

Where no danger could deter from the pursuit of power, no balancing of pain with pleasure availed to quench the ardour of desire. With full knowledge that violent delights have violent ends and in their triumph die, the fateful condition was accepted. Not only did Giordano Bruno, in conscious parallelism with his theory of matter, declare that without mutation, variety and vicissitude nothing would be agreeable, nothing good, nothing delightful, that enjoyment consists solely in transition and

movement, and that all pleasure lies midway between the painful longing of fresh appetite and the sadness of its satiation and extinction¹; but the sedater wisdom of Bacon, in touching on the controversy between Callicles and Socrates, seems to incline towards the side of the former; and in all cases warns men not to make too much of the inconveniences attendant on pleasure, but "so to procure serenity as they destroy not magnanimity".²

These, then, were the principal elements of the philosophical Renaissance. First, there was a certain survival of Aristotelianism as a method of comprehensive and logical arrangement. Then there was the new Platonism, bringing along with it a revival of either Alexandrian or mediaeval pantheism, and closely associated with geometrical studies. Thirdly, there was the old Greek Atomism, as originally set forth by Democritus or as re-edited by Epicurus, traditionally unfavourable to theology, potent alike for decomposition and reconstruction, confirmed by the new astronomy, and lending its method to the reformation of mathematics; next the later Greek ethical systems; and finally the formless idea of infinite power which all Greek systems had, as such, conspired to suppress, but which, nevertheless, had played a great part in the earlier stages of Greek speculation both physical and moral.

On these foundations the lofty edifice of Spinozism was reared; out of these materials its composite structure was built; and without a previous study of them it cannot be understood.

Whether Spinoza ever read Plato is doubtful. One hardly sees why he should have neglected a writer whose works were easily accessible, and at that time very popular with thinking minds. But whether he was acquainted with the *Dialogues* at first hand or not, Plato will help us to understand Spinoza, for it was through the door of geometry that he entered philosophy, and under the guidance of one who was saturated with the Platonic spirit; so far as Christianity influenced him, it was through elements derived from Plato; and his metaphysical method was one which, more than any other, would have been welcomed with delight by the author of the *Meno* and the *Republic*, as an attempt to realise his own dialectical ideal. For Spinozism is, on the face of it, an application of geometrical reasoning to philosophy, and especially to ethics. It is also an attempt to prove transcendently what geometricians only assume—the necessity of space. Now, Plato looked on geometrical demonstration as the great type of certainty, the scientific completion

¹ *Spaccio della Bestia Trionfante, sub in.*

² *Advancement of Learning*, Ellis & Spedding, III., 428.

of what Socrates had begun by his interrogative method, the one means of carrying irrefragable conviction into every department of knowledge, and more particularly into the study of our highest good. On the other hand he saw that geometers assume what itself requires to be demonstrated; and he confidently expected that the deficiency would be supplied by his own projected method of transcendental dialectics. Such at least seems to be the drift of the following passage: "When I speak of the division of the intellectual, you will also understand me to speak of that knowledge which reason herself attains by the power of dialectic, using the hypotheses not as first principles, but only as hypotheses—that is to say as steps and points of departure into a region which is above hypotheses, in order that she may soar beyond them to the first principle of the whole; and clinging to this and then to that which depends on this, by successive steps she descends again without the aid of any sensible object, beginning and ending in ideas".¹

The problem, then, which Spinoza set himself was, first, to account for the fundamental assumptions of all science, and more particularly of geometry, by deducing them from a single self-evident principle; and then to use that principle for the solution of whatever problems seemed to stand most in need of its application. And, as usually happens in such adventurous enterprises, the supposed answer of pure reason was obtained by combining or expanding conceptions borrowed without criticism from pre-existing systems of philosophy.

Descartes had already accomplished a great simplification of the speculative problem by summing up all existence under the two heads of extension and thought. It remained to account for these, and to reduce them to a single idea. As we have seen, they were derived from Greek philosophy, and the bond which was to unite them must be sought for in the same direction. It will be remembered that the systems of Plato and Aristotle were bounded at either extremity by a determinate and by an indeterminate principle. With the one, existence ranged between the Idea of Good at the upper end of the scale and empty space at the lower; with the other, between absolute Thought and First Matter. It was by combining the two definite terms, space and thought, that Descartes had constructed his system; and after subtracting these the two indefinite terms remained. In one respect they were even more opposed to each other than were the terms with which they had been respectively associated. The Idea of Good represented unity, identity, and constancy, as against plurality, difference, and change; while Aristotle's Matter

¹ *Republic* VI. 511, in Jowett's Trans. III. 398.

was by its very definition multiform, fluctuating, and indeterminate. Nevertheless, there were equally important analogies traceable between them. No very clear account could be given of either, and both were customarily described by negatives. If Matter fell short of complete existence, the Good transcended all existence. If the one was a universal capacity for assuming Forms, the other was the source whence all Forms proceeded. When the distinctive characteristics of an individual were thought away, the question might well be mooted into which principle it would return. The ambiguous use of the word Power contributed still further to their identification, for it was not less applicable to the receptive than to the productive faculty. Now, we have just seen into what importance the idea of Power suddenly sprang at the Renaissance: with Bruno it was the only abiding reality of nature; with Hobbes it was the only object of human desire.

Another term occupying a very large place in Aristotle's philosophy was well adapted to mediate between and eventually to unite the two speculative extremes. This was Substance; in logic the subject of predication, in metaphysics the substratum of qualities, the *οὐσία* or Being of the Ten Categories. Now, First Matter might fairly claim the position of a universal subject or substance, since it was invested with every sensible quality in turn, and even, as the common element of all Forms, with every thinkable quality as well. Aristotle himself had finally pronounced for the individual compound of Form and Matter as the true substance. Yet he also speaks as if the essential definition of a thing constituted the thing itself; in which case Form alone could be the true subject; and a similar claim might be put forward on behalf of the Plotinian One.

Such were the *a priori* elements which a historical synthesis had prepared to satisfy the want of a metaphysical Absolute. Let us now see what result would follow when the newly-recovered idea of space was subjected to a metaphysical analysis. Extension is both one and infinite. No particular area can be conceived apart from the whole which both contains and explains it. Again, extension is absolutely homogeneous; to whatever distance we may travel in imagination there will still be the same repetition of similar parts. But space, with the Cartesians, meant more than a simple juxtaposition of parts; having been made the essence of matter, it was invested with mechanical as well as with geometrical properties. The bodies into which it resolved itself were conceived as moving, and as communicating their movement to one another through an unbroken chain of causation in which each constituted a single link, determining and determined by the rest; so that, here also, each part was explained

by reference to an infinite whole, reproducing its essence, while exempt from the condition of circumscribed existence. We can understand, then, that when the necessity of accounting for extension itself once became felt, the natural solution would be to conceive it as holding the same relation to some greater whole which its own subdivisions held to their sum total; in other words it should be at once a part, an emanation, and an image of the ultimate reality, which in turn could be only conceived as its multiplication *ad infinitum*.

The direction in which a method for explaining Thought would most readily suggest itself, was given both in the proper form of thinking, and in its presumed parallelism with extension. Speaking philosophically, to think was to reason, and to reason was to subsume a lower under a higher or more universal concept, to resolve all subjects into a single predicate, or to connect all predicates with a single subject; and owing to Aristotle's confusion of formal with efficient causes, this process was considered identical with that by which we rise to the knowledge of determining antecedents in the external world.

Spinoza gathered up all the threads of speculation thus made ready for his grasp, when he defined God as a substance consisting of infinite attributes, each of which expresses his infinite and eternal essence; subsequently adding that the essence here spoken of is Power, and that two of the infinite attributes are Extension and Thought, whereof the particular things known to us are modes. If, now, we ask why there should be such an existence as space, the answer is because existence, being infinite, must necessarily include every conceivable thing. The argument is strikingly like a principle of the Epicurean philosophy, and may well have been suggested by it. According to Lucretius, the appearance of design in our world need not be attributed to creative intelligence, because infinite atoms moving in infinite manners through infinite time, must at length arrive, after a comprehensive series of experiments, at the present frame of things¹; and the same principle is invoked on a smaller scale to account for the origin of organised beings, of memory, and of civil society.² In both systems infinite space is the root-conception; but what Lucretius had legitimately used to explain becoming, Spinoza illegitimately applies to the elucidation of being. At one stroke all empirical knowledge is placed on an

¹ ——— Quia multimodis, multis, mutata, per omne
Ex infinito vexantur percita plagis,
Omne genus motus, et cœtus experiundo,
Tandem deveniunt in taleis disposituras,
Qualibus hæc rebus consistit summa creata.—I., 1023-7.

² V. 853, IV. 780-800, V. 1025.

a priori foundation. By assuming unlimited credit at the bank of the universe we entitle ourselves to draw a cheque for any particular amount. Thus the idea of infinite attributes is no mere collateral speculation, but forms an essential element of Spinozism. The known varieties of existence are, so to speak, surrounded, supported, and fixed in their places by the endless multitude of the unknown. And this conception of being as absolutely infinite, is another proof of Spinoza's Platonic tendencies, for it involves the realisation of an abstract idea, that is to say, of Being, which the philosopher treats as something more comprehensive than the facts of consciousness whence it is derived.

The relation of Spinoza's Substance to its attributes is ambiguous. It is at once their cause, their totality, and their unity. The highly elastic and indefinite term Power helped these various aspects to play into and replace one another according to the requirements of the system. It is associated with the subjective possibility of multiplying imaginary existences to any amount; with the causal energy in which existence originates; and with the expansiveness characteristic alike of Extension and of Thought. For the two known attributes of the universal substance are not simply related to it as co-predicates of a common subject; they severally express its essential Power, and are, to that extent, identical with one another. But when we ask, How do they express Power? the same ambiguity recurs. Substance is revealed through its attributes as a cause through its effects; as an aggregate through its constituents; and as an abstract notion through its concrete embodiments. Thus Extension and Thought are identical through their very differences, since these illustrate the versatility of their common source, and at the same time jointly contribute to the realisation of its perfection. But, for all practical purposes, Spinoza deals only with the parallelism and resemblance of the attributes. We have to see how he establishes it, and how far he was helped in so doing by the traditions of Greek philosophy.

It has been already shown how Extension, having become identified with matter, took on its mechanical qualities, and was conceived as a connected series of causes or modes of motion. The parallel found by Spinoza for this series is the chain of reasons and consequents forming a demonstrative argument; and here he is obviously following Aristotle, who although ostensibly distinguishing between formal and efficient causes, hopelessly confounds them in the second book of his *Posterior Analytics*. We are said to understand a thing when we bring it under a general rule, and when we discover the mechanical

agency which produces it. For instance, we may know that a particular man will die, either from the fact that all men are mortal, or from the fact that he has received a fatal wound. The general rule, however, is not the cause of what will happen, but only the cause of our knowing that it will happen; and knowledge of the rule by no means carries with it a knowledge of the efficient cause, as we see in the case of gravitation and other natural forces whose *modus operandi* is still a complete mystery. What deceived Aristotle was partly his false analysis of the syllogism which he interpreted as the connexion of two terms by the interposition of a middle answering to the causal nexus of two phenomena; and partly his conception of the universe as a series of concentric spheres through which movement is transmitted from without, thus combining the two ideas of notional comprehension and mechanical causation. Be this as it may, Spinoza takes up the Aristotelian identification of logical with dynamical connexion, and gives it the widest possible development. For the Stagirite would not, at any rate, have dreamed of attributing any but a subjective existence to the demonstrative series, nor of extending it beyond the limits of our actual knowledge. Spinoza, on the other hand, assumes that the whole infinite chain of material causes is represented by a corresponding chain of eternal ideas; and this chain he calls the infinite intellect of God. Here, besides the necessities of systematisation, the influence of mediaeval realism is plainly evident. For, when the absolute self-existence of Plato's Ideas had been surrendered in deference to Aristotle's criticism, a home was still found for them by Plotinus in the eternal Nous, and by the Christian Schoolmen in the mind of God; nor did such a belief present any difficulties so long as the divine personality was respected. The pantheism of Spinoza, however, was absolute, and excluded the notion of any but a finite subjectivity. Thus the infinite intellect of God is an unsupported chain of ideas recalling the theory at one time imagined by Plato.¹ Or its existence may be merely what Aristotle would have called potential; in other words, Spinoza may mean that reasons will go on evolving themselves so long as we choose to study the dialectic of existence, always in strict parallelism with the natural series of material movements constituting the external universe; and just as this is determined through all its parts by the totality of extension, or of all matter (whether moving or motionless) taken together, so also at the summit of the logical series stands the idea of God, from whose definition the demonstration of every lesser idea necessarily follows. It

¹ See the passage from the *Republic* quoted above.

is true that in a chain of connected energies the antecedent, as such, must be always precisely equal to the consequent; but apparently this difficulty did not present itself to Spinoza, nor need we be surprised; for Kant, coming a century later, was still so imbued with Aristotelian traditions as, similarly, to derive the category of Cause and Effect from the relation between Reason and Consequent in hypothetical propositions.¹

Meanwhile the parallelism between Thought and Extension was not exhausted by the identification just analysed. Extension was not only a series of movements; it still remained an expression for coexistence and adjacency. Spinoza, therefore, felt himself obliged to supply Thought with a correspondingly continuous quality. It is here that his chief originality lies, here that he has been most closely followed by the philosophy of our own time. Mind, he declares, is an attribute everywhere accompanying matter, co-extensive and co-infinite with space. Our own animation is the sum or the resultant of an animation clinging to every particle that enters into the composition of our bodies. When our thoughts are affected by an external impulse, to suppose that this impulse proceeds from anything material is a delusion; it is produced by the mind belonging to the body which acts on our body; or rather the two actions are only different aspects of a single process. Spinoza has clearly explained the doctrine of animal automatism, and shown it to be perfectly conceivable; but he has entirely omitted to explain how the parallel influence of one thought (or feeling) on another is to be understood; for although this too is spoken of as a causal relation, it seems to be quite different from the logical concatenation described as the infinite intellect of God; and to suppose that idea follows from idea like movement from movement would amount to a complete materialisation of mind; while our philosopher would certainly have repudiated Mr. Shadworth Hodgson's theory that states of consciousness are only connected through their extended substratum as the segments of a mosaic picture are held together by the underlying surface of masonry.

The analogy between Thought and Extension under the two aspects of necessary connexion and mere contingent relation in coexistence or succession was, in truth, more interesting to its author as a basis for his ethical than as a development of his metaphysical speculation. The two orders of relations represent, in their distinction, the opposition of science to opinion or imagination, the opposition of dutiful conviction to blind or selfish

¹ The tendency of logicians is now, contrariwise, to force reasoning into parallelism with mathematical physics by interpreting the proposition as an equation between subject and predicate.

impulse. Spinoza borrows from the Stoics their identification of volition with belief; but in working out the consequences of this principle it is of Plato rather than of the Stoics that he reminds us. The passions are in his system what sense, imagination and opinion were in that of the Athenian idealist; and his ethics may almost be called the metaphysics of the *Republic* turned outside in. Joy, grief and desire are more or less imperfect perceptions of reality—a reality not belonging to the external world but to the conscious subject itself. When Spinoza traces them to a consciousness or expectation of raised or lowered power, we recognise the influence of Hobbes; but when, here as elsewhere, he identifies power with existence, we detect a return to Greek forms of thought. The great conflict between illusion and reality is fought out once more; only this time it is about our own essence that we are first deceived and then enlightened. If the nature and origin of outward things are half revealed, half concealed by sense and imagination, our emotions are in like manner the obscuring and distorting medium through which we apprehend our inmost selves, and whatever adds to or takes away from the plenitude of our existence; and what science is to the one, morality and religion are to the other.

It is remarkable that while Spinoza was giving a new application to the Platonic method, another Cartesian, Malebranche, was working it out more strictly on the old lines of speculative research. The *Recherche de la Vérité* of this unjustly neglected thinker is a methodical account of the various subjective obstacles which impede our apprehension of things as they really exist, and of the means by which it may be facilitated. Here also, attention is concentrated on the subjective side of philosophy; and if the mental processes selected for study are of theoretical rather than practical interest, we may probably attribute this to the circumstance that every ethical question was already decided for Malebranche by the Church whose orders he had assumed. But it was not merely in the writings of professed philosophers that the new aspect of Platonism found expression. All great art embodies in one form or another the leading conceptions of its age; and the latter half of the seventeenth century found such a manifestation in the comedies of Molière. If these works stand at the head of French literature, they owe their position not more to their author's brilliant wit than to his profound philosophy of life; or rather we should say that with him wit and philosophy are one. The comic power of Shakespeare was shown by resolving the outward appearances of this world into a series of dissolving illusions. Like Spinoza and Malebranche, Molière turns the illusion in, showing what perverted opinions men form of themselves and others, through

misconceptions and passions either of spontaneous growth or sedulously fostered by designing hands. Society, with him, seems almost entirely made up of pretenders and their dupes, both characters being not unfrequently combined in the same person, who is made a victim through his desire to pass for what he is not and cannot be. And this is what essentially distinguishes the art of Molière from the New Comedy of Athens, which he, like other moderns, had at first felt inclined to imitate until the success of the *Précieuses Ridicules* showed him where his true opportunities lay. For the New Comedy was Aristotelian where it was not simply humanist; that is to say, it was an exhibition of types like those sketched by Aristotle's disciple, Theophrastus, and already prefigured in the master's own *Ethics*. These were the perennial forms in a world of infinite and perishing individual existences, not concealed behind phenomena, but incorporated in them and constituting their essential truth. The Old Comedy is something different again; it is prae-philosophic, and may be characterised as an attempt to describe great political interests and tendencies through the medium of myths and fables and familiar domesticities, just as the old theories of nature, the old lessons of practical wisdom, and the first great national chronicles had been thrown into the same homely form.¹

The purely intellectual view of human nature, the definition of mind in terms of cognition, is one more fallacy from which Aristotle's teaching, had it not fallen into neglect or contempt, might have guarded Spinoza. Nevertheless, his parallelism between passion and sensuous perception saves him from the worst extravagances of his Greek predecessors. For the senses, however much they might be maligned, never were nor could be altogether rejected; while the passions met with little mercy from Plato and with none from the Stoics, who considered them not only unnecessary but even unnatural. Spinoza more wisely sees in them assertions, however obscure and confused, of the will to be and grow which constitutes individual existence. And he sees that they can no more be removed by pointing out their evil consequences than sense-impressions can be abolished by proving their fallaciousness. On the other hand, when Spinoza speaks as if one emotion could only be conquered or expelled by another emotion, we must not allow his peculiar phraseology to conceal from us the purely intellectual character of his whole ethical system. What he really holds is that emotion can be overcome by reason or better knowledge, be-

¹ Greek tragedy is just the reverse—an expansion of the old patriarchal relations into a mould fitted to receive the highest thought and feeling of a civilised age.

cause it is itself an imperfect cognition. Point by point, an analogy—or something more than an analogy—is made out between the errors of sensuous perception joined to imagination, and the errors of our spontaneous efforts after happiness or self-realisation. Both are imposed on us from without, and neither can be got rid of by a simple act of volition. Both are affected by illusions of perspective: the nearer object of desire, like the nearer object of perception, assuming a disproportionate place in the field of view. In both, accidental contiguity is habitually confounded with causation; while in both the assignment of causes to effects, instead of being traced back through an infinite series of antecedents, stops short with the antecedent nearest to ourselves. If objects are classified according to their superficial resemblances or the usages of common language, so also are the desires sustained and intensified by imitation and rivalry. By parity of reasoning, moral education must be conducted on the same lines as intellectual education. First, it is shown how our individual existence, depending as it does on forces infinitely exceeding our own, is to be maintained. This is chiefly done by cultivating friendly relations with other men; probably, although Spinoza does not himself make the comparison, on the same principle as that observed in the mutual assistance and rectification of the senses, together with their preservation by means of verbal signs. The misleading passions are to be overcome by discovering their origin; by referring the pleasures and pains which produce them to the right causes; by calling in thought to redress the balance of imagination; by dividing the attention among an infinite number of causes; finally, by demonstrating the absolute necessity of whatever actions excite them, and classifying them according to their relations, in the same way that the phenomena of the material world are dealt with when subjected to scientific analysis.

So far Spinoza, following the example of Stoicism, has only studied the means by which reason conquers passion. He now proceeds to show, in the spirit of Plato or of Platonic Christianity, how far superior to the pleasures of sense and opinion are those afforded by true religion—by the love of God and the possession of eternal life. But, here also, as in the Greek system, logic does duty for emotion. The love of God means no more than viewing ourselves as filling a place in the infinite framework of existence, and as determined to be what we are by the totality of forces composing it. And eternal life is merely the adjustment of our thoughts to the logical order by which all modes of existence are deducible from the idea of infinite power.

Thus, while Spinoza draws to a head all the tendencies in-

herited from Greek philosophy, borrowing from the early physicists their necessarianism; from the Atomists, their exclusion of final causes, their denial of the supernatural, and their infinite worlds; from the Athenian school, their distinction between mind and body and between reason and sense; from Aristotle, his parallelism between causation and syllogism; from the Epicureans, their vindication of pleasure; and from the Stoics, their identification of belief with action, their conquest of passion and their devotion to humanity;—it is to the dominant Platonism of the seventeenth century that his system owes its foundation, its development, and its crown; for he begins by realising the abstract conception of being, and infers its absolute infinity from the misleading analogy of space which is not an abstraction at all; deduces his conclusions according to the geometrical method recommended by Plato; and ends like Plato, by translating dialectic formulas into the emotional language of religious faith.

From this grand synthesis, however, a single element was omitted; and, like the uninvited guest of fairy tradition, it proved strong enough singly to destroy what had been constructed by the united efforts of all the rest. This was the sceptical principle, the critical analysis of ideas, first exercised by Protagoras, made a new starting-point by Socrates, carried to perfection by Plato, supplementing experience with Aristotle, and finally proclaimed in its purity as the sole function of philosophy by an entire school of Greek thought.

Notwithstanding the sterility commonly associated with mere negation, it was this which, of all the later Greek schools, possessed the greatest powers of growth. Besides passing through more than one stage of development on its own account, Scepticism imposed serious modifications on Stoicism, gave birth to Eclecticism, and contributed to the establishment of Neo-Platonism. The explanation is not far to seek. The more highly organised a system is, the more resistance does it offer to change, the more does its transmission tend to assume a rigidly scholastic form. To such dogmatism the Sceptics were, on principle, opposed; and by keeping the problems of philosophy open, they facilitated the task of all who had a new solution to offer; while mind and its activities being, to some extent, safe from the universal doubt, the sceptical principle spontaneously threw back thought on a subjective instead of an objective synthesis of knowledge—in other words, on that psychological idealism the pregnancy and comprehensiveness of which are every day becoming more clearly recognised. And we shall now see how the same fertilising power of criticism has been manifested in modern times as well.

The sceptical philosophy, already advocated in the Middle Ages by John of Salisbury, was, like every other form of ancient thought, revived at the Renaissance, but only under the very superficial form which infers from the coexistence of many divergent opinions that none of them can be true. Even so, however, it led Montaigne to sounder notions of toleration and humanity than were entertained by any of his contemporaries. With Bacon, and still more with Descartes, it also appears as the necessary preparation for a remodelling of all belief; but the great dogmatic systems still exercised such a potent influence on both those thinkers that their professed demand for a new method merely leads up to an altered statement of the old unproved assumptions.

Meanwhile the old principle of universal doubt could no longer be maintained in presence of the certainties already won by modern science. Man, in the time of Newton, had, as Pope tersely puts it, "too much knowledge for the sceptic side". The problem was not how to establish the reality, but how to ascertain the origin and possible extent of that knowledge. The first to perceive this, the first to evolve criticism out of scepticism, and therefore the real founder of modern philosophy, was Locke. Nevertheless, even with him, the advantage of studying the more recent in close connexion with the earlier developments of thought does not cease; it only enters on a new phase. If he cannot, like his predecessors, be directly affiliated to one or more of the Greek schools, his position can be illustrated by a parallel derived from the history of those schools. What Arcesilaus and Carneades had been to Socrates and his successors, that Locke was in a large measure to Bacon and the Cartesians. He went back to the initial doubt which with them had been overborne by the dogmatic reaction, and insisted on making it a reality. The spirit of the *Apologia* is absent from Plato's later dialogues, only to reappear with even more than its original power in the teaching of the New Academy. And, in like manner, Descartes' introspective method, with its demand for clear ideas, becomes, in the *Essay concerning Human Understanding*, an irresistible solvent for the psychology and physics of its first propounder. The doctrine of innate ideas, the doctrine that extension is the essence of matter, the doctrine that thought is the essence of mind, the more general doctrine, held also by Bacon, that things have a discoverable essence whence all their properties may be deduced by a process analogous to mathematical reasoning,—all collapsed when brought to the test of definite and concrete experience. We have here, indeed, something comparable not only to the scepticism of the New Academy, but also to the Aristotelian criticism of Plato's metaphysics; and at

first sight it might seem as if the Peripatetic philosophy was destined once more to regain the position taken from it by the resuscitation of its ancient foe. But Locke was not inclined to substitute one form of scholasticism for another. By applying the analytical method of Atomism to knowledge itself, he created a weapon equally fatal to the two competing systems. Under his dissection the concrete individual substance of the one vanished no less completely than the universal ideas of the other. Nothing remained but a bundle of qualities held together by a subjective bond.

Similarly, in political science the analytical method of assuming civil government to result from a concurrence of individual wills, which with Hobbes had served only to destroy ecclesiastical authority, while leaving intact and even strengthening the authority of secular rulers, was reinterpreted by Locke as a negation of all absolutism whatever.

It is interesting to observe how, here also, the positive science of the age had a large share in determining its philosophic character. Founded on the discovery of the earth's true shape, Aristotle's metaphysics had been overthrown by the discovery of the earth's motion. And now the claims of Cartesianism to have furnished an exact knowledge of matter and a definition of it whence all the facts of observation could be deduced *a priori*, were summarily refuted by the discovery of universal gravitation. The Cartesians complained that Newton was bringing back the occult qualities of the Schoolmen; but the tendency of bodies to move towards one another proved as certain as it was inexplicably mysterious. For a time, the study of causes was superseded by the study of laws; and the new method of physical science moved in perfect harmony with the phenomenonism of Locke. One most important consequence of this revolution was to place the new Critical philosophy on a footing quite different from that occupied by the ancient sceptics. Both restricted certain knowledge to our own states of consciousness; but it now appeared that this might be done without impeaching the value of accepted scientific conclusions, which was more than the Academic philosophy would have admitted. In other words, granting that we were limited to phenomena, it was shown that science consisted in ascertaining the relations of these phenomena to one another instead of to a problematic reality lying behind them; while, that such relations existed and were, in fact, part of the phenomena themselves, was what no sceptic could easily deny.

Nevertheless in each case subjective idealism had the effect of concentrating speculation, properly so called, on ethical and practical interests. Locke struck the keynote of eighteenth

century philosophy when he pronounced morality to be "the proper science and business of mankind in general".¹ And no sooner had morality come to the front than the significance of ancient thought again made itself apparent. Whether through conscious imitation, or because the same causes brought about the same effects, ethical inquiries moved along the lines originally laid down in the schools of Athens. When rules of conduct were not directly referred to a divine revelation, they were based either on a supposed law of nature, or on the necessities of human happiness, or on some combination of the two. Nothing is more characteristic of the eighteenth century than its worship of nature. Even the theology of the age is deeply coloured by it; and with the majority of those who rejected theology it became a new religion. But this sentiment is demonstrably of Greek origin, and found its most elaborate, though not its most absolute expression in Stoicism. The Stoics had inherited it from the Cynics, who held the faith in greater purity; and these, again, so far as we can judge, from a certain Sophistic school, some fragments of whose teaching have been preserved by Xenophon and Plato; while the first who gave wide currency to this famous abstraction was, in all probability, Heracleitus. To the Stoics, however, is due that intimate association of naturalism with teleology which meets us again in the philosophy of the last century, and even now wherever the doctrine of evolution has not been thoroughly accepted. It was assumed, in the teeth of all evidence, that nature bears the marks of a uniformly beneficent design, that evil is exclusively of human origin, and that even human nature is essentially good when unspoiled by artificial restrictions.

Yet if teleology was, in some respects, a falling-off from the rigid mechanism first taught by the prae-Socratic schools and then again by the Cartesian school, in at least one respect it marked a comparative progress. For the first attempts made both by ancient and modern philosophy to explain vital phenomena on purely mechanical principles were altogether premature; and the immense extension of biological knowledge which took place subsequently to both, could not but bring about an irresistible movement in the opposite direction. The first to revive teleology was Leibniz, who furnished a transition from the seventeenth to the eighteenth century by his monadology. In this, Atomism is combined with Aristotelian ideas just as it had previously been combined with Platonic ideas by Descartes. The movement of the atoms is explained by their aspiration after a more perfect state instead of by mechanical pressure.

¹ *Essay*, Bk. iv. ch. 12.

But while Leibniz still relies on the ontological argument of Descartes to prove the existence of God, this was soon abandoned, along with the cosmological argument, for the argument from design, which was also that used by the Stoics; while in ethics the fitness of things was substituted for the more mechanical law of self-preservation, as the rule of conduct; and the subjection of all impulse to reason was replaced by the milder principle of a control exercised by the benevolent over the malevolent instincts. This was a very distinct departure from the Stoic method, yet those who made it were more faithful to teleology than Stoicism had been; for to condemn human feeling altogether was implicitly to condemn the work of nature or of God.

The other great ethical method of the eighteenth century, its hedonism, was closely connected with the sceptical movement in speculative philosophy, and like that received an entirely new significance by becoming associated with the idea of law. Those who isolate man from the universe are necessarily led to seek in his interests as such the sole regulator of his actions, and their sole sanction in the opinion of his fellows. Protagoras went already so far, notwithstanding his unwillingness to recognise pleasure as the supreme end; and in the system of his true successor, Aristippus, the most extreme hedonism went hand in hand with the most extreme idealism; while with Epicurus, again, both are tempered by the influence of naturalism imposing on him its conceptions of objective law alike in science and in practice. Still his system leaned heavily to the side of self-gratification pure and simple; and it was reserved for modern thought to establish a complete equilibrium between the two competing tendencies of Greek ethics. This has been effected in Utilitarianism; and those critics are entirely mistaken who, like M. Guyau, regard it as a mere reproduction of Epicureanism. It might with full as much reason be called a modern version of Stoicism. The idea of humanity is essentially Stoic; to work for the good of humanity was a Stoic precept; and to sacrifice one's own pleasure for that higher good is a virtue which would have satisfied the most rigorous demands of a Cleanthes, an Epictetus, or an Aurelius.

Utilitarianism agrees with the ancient hedonism in holding pleasure to be the sole good and pain the sole evil. Its adherents also, for the most part, admit that the desire of the one and the dread of the other are the sole motives to action; but, while making the end absolutely universal and impersonal, they make the motive into a momentary impulse without any necessary relation to the future happiness of the agent himself. The good man does his duty because doing it gives him pleasure,

or because the failure to do it would give him pain, at the moment; although he knows that a contrary course would save him from greater pain or win him greater pleasure hereafter. No accurate thinker would call this acting from a selfish or interested motive; nor does it agree with the teaching of Epicurus. Were all sensitive beings to be united in a single organism, then, on utilitarian principles, self-interest, interpreted in the sense of seeking its own preservation and pleasure, would be the only law that the individualised aggregate could rationally obey. But the good of each part would be rigorously subordinated to the good of the whole; and utilitarian morality desires that we should act as if this hypothesis were realised, at least in reference to our own particular interests. Now, the idea of humanity as forming such a consolidated whole is not Epicurean. It belongs to the philosophy which always reprobated pleasure precisely because its pursuit was associated with the dereliction of public duty and with bitter rivalry for the possession of what, by its very nature, existed only in limited quantities, while the demand for it was unlimited or at any rate far exceeded the supply. According to the Stoics, there was only one way in which the individual could study his private interest without abandoning his position as a social being, and this was to find it exclusively in the practice of virtue. But virtue and public interest remained mere forms scantily supplemented by appeals to the traditional morality, until the idea of generalised happiness, of pleasure diffused through the whole community, came to fill them with substance and life. It has also to be observed that the idea of utility as a test of moral goodness is quite distinct from hedonism. Plato proclaims in the most unequivocal terms that actions must be estimated by their consequences instead of by the feelings of sympathy or antipathy which they excite; yet no one could object more strongly to making pleasure the end of action. Thus, three distinct doctrines seem to converge in modern English ethics, of which all are traceable to Greek philosophy, but only one to Epicureanism in particular, and not ultimately to that but to the older systems whence it sprang.

And here we unexpectedly find ourselves confronted by a new relation between ancient and modern thought. Each acts as a powerful precipitant on the other, dissolving what might otherwise have passed for inseparable associations, and combining elements which a less complete experience might have led us to regard as necessarily incompatible with one another. The instance just analysed is highly significant; nor does it stand alone. Modern spiritualists often talk as if morality was impossible apart from their peculiar metaphysics. But the Stoics, confessedly the purest moralists of antiquity, were uncompromising

materialists; while the spiritualist Aristotle taught what is not easily distinguishable from a very refined sort of egoism. Again, the doctrine of free-will is now commonly connected with a belief in the separability of consciousness from matter, and like that is declared to be an indispensable condition of morality. Among the Greeks, however, it was held by the materialist Epicureans more distinctly than by any other school; while the Stoics did not find necessarianism inconsistent with self-sacrificing virtue. The partial derivation of knowledge from an activity in our own minds is another supposed concomitant of spiritualism; although Aristotle traces every idea to an external source, while at the same time holding some cognitions to be necessarily true—a theory repudiated by modern experientialists. To Plato the spirituality of the soul seemed to involve its pre-existence no less than its immortality, a consequence not accepted by his modern imitators. Teleology is now commonly opposed to pantheism; the two were closely combined in Stoicism; while Aristotle, although he believed in a personal God, attributed the marks of design in nature to purely unconscious agencies.

The naturalism and utilitarianism of the eighteenth century are the last conceptions directly inherited from ancient philosophy by modern thought. Henceforward, whatever light the study of the former can throw on the vicissitudes of the latter, is due either to their partial parallelism or to an influence becoming every day fainter and more difficult to trace amid the multitude of factors involved. The progress of analytical criticism was continually deflected or arrested by the still powerful resistance of scholasticism, just as the sceptical tendencies of the New Academy had been before, though happily with less permanent success; and as, in antiquity, this had happened within no less than without the critical school, so also did Locke cling to the theology of Descartes; Berkeley lapse into Platonism; Hume play fast and loose with his own principles, while Reid was rallying the Aristotelian psychology to a desperate stand against the new movement; and Kant leaves it doubtful to which side he belonged, so evenly were the two opposing tendencies balanced in his mind, so dexterously did he adapt the new criticism to the framework of scholastic logic and metaphysics.

Meanwhile the strength of the analytical method was doubled by its extension to the phenomena of growth and change; for, as applied to these, it became the famous theory of Development or Evolution. No idea belongs so completely to modern philosophy; for even the ancient thinkers who threw their cosmology into a historical form had never attempted to explain the present

by the past. If anything, they explained the past by the present, assuming a rough analogy to exist between the formation of the universe as a whole and the genesis of those natural or artificial bodies which were continually growing or being built up before their eyes. Their cosmology was, in fact, nothing but the old mythology stripped of its personal or conscious element; and, like it, was a hypothesis unsupported by any external evidence;—a criticism not inconsistent with the admission that this elimination of the supernatural element from speculation was, even in the absence of any solid addition to human knowledge, an achievement of inestimable value. The evolutionary method is also an elimination of the supernatural, but it is a great deal more. By tracing the history of compound structures to their first origin, and noting the successive increments to which their gradual growth is due, it reveals, as no statical analysis ever could, the actual order of synthesis, and the meaning of the separate constituents by whose joint action their movements are determined; while, conversely, their dissolution supplies us with a number of ready-made experiments in which the influence of each particular factor in the sum total may be detected by watching the changes that came on its removal. In a word, the method of evolution is the atomistic method, extended from matter to motion, and viewed under the form of succession instead of under the form of coexistence.

As a universal philosophy, the theory of Development, like every other modern idea, has only been permitted to manifest itself in combination with different forms of the old scholasticism. The whole speculative movement of our century is made up of such hybrid systems; and three in particular still divide the suffrages of many thinking men who have not been able entirely to shake off the influence of reactionary ideas. These are the systems of Hegel, of Comte, and of Mr. Herbert Spencer. In each the logic and metaphysics inherited from Greek thought are variously compounded with the new science. And each, for that very reason, serves to facilitate the transition from one to the other; a part analogous to that played among the Greeks themselves by the vast constructions of Plato and Aristotle, or, in an age of less productivity, by the Stoic and Alexandrian eclectics.

The influence of Aristotle has, indeed, continued to make itself felt not only through the teaching of his modern imitators, but more directly as a living tradition in literature, or through the renewed study of his writings at first hand. Even in the pure sciences it survived until a comparatively recent period, and, so far as the French intellect goes, is not yet entirely extinct. From Abélard on, Paris was the headquarters of that

soberer scholasticism which took its cue from the Peripatetic logic; and the resulting direction of thought, deeply impressed as it became on the French character and the French language, was interrupted rather than permanently altered by the Cartesian revolution, and with the fall of Cartesianism gradually recovered its old predominance. The Aristotelian philosophy is remarkable above all others for clear definitions, full descriptions, comprehensive classifications, lucid reasoning, encyclopædic science, and disinterested love of knowledge; along with a certain incapacity for ethical speculation,¹ strong conservative leanings, and a general tendency towards the rigid demarcation rather than the fruitful commingling of ideas. And it will probably be admitted that these are also traits characteristic of French thinking as opposed to English or German thinking. For instance, widely different as is the *Mécanique Céleste* from the astronomy of Aristotle's treatise *On the Heavens*, both agree in being attempts to prove the eternal stability of the celestial system.² The destructive deluges by which Aristotle supposes civilisation to be periodically interrupted, reappear on a larger scale in the theory of catastrophes still held by French geologists. Another Aristotelian dogma, the fixity of organic species, though vigorously assailed by eminent French naturalists, has, on the whole, triumphed over the opposite doctrine of transformism in France, and now impedes the acceptance of Mr. Darwin's teaching even in circles where theological prepossessions are extinct. The accepted classifications in botany and zoology are the work of Frenchmen following in the footsteps of Aristotle, whose genius for methodical arrangement was signally exemplified in at least one of these departments, the division of animals into vertebrate and invertebrate being originally due to him. Bichat's distinction between the animal and the vegetable functions recalls Aristotle's distinction between the sensitive and nutritive souls; while his method of studying the tissues before the organs is prefigured in the treatise on the *Parts of Animals*. For a long time the ruling of Aristotle's *Poetics* was undisputed in French criticism; and if anything could disentitle Montesquieu's *Esprit des Lois* to the proud motto, *Prolem sine matre creatam*, it would be its close relationship to the *Politics* of the same universal master. Finally, if it be granted that the enthusiasm for knowledge irrespective of its utilitarian applications exists to a greater degree among the educated classes

¹ What Aristotle has written on the subject is not ethics but natural history.

² "Ne remarque-t-on comment chaque recherche analytique de Laplace a fait ressortir dans notre globe et dans l'univers des conditions d'ordre et de durée?"—Arago, *Œuvres* III. 496.

of France than in any other modern society, we may plausibly attribute this honourable characteristic to the fostering influence of one who has proclaimed more eloquently than any other philosopher that theoretical activity is the highest good of human life, the idea of all nature, and the sole beatitude of God.

It remains to add a few words on the position which ancient and modern philosophy respectively occupy towards theology. Here their relation is one of contrast rather than of resemblance. The Greek thinkers start at an immense distance from religious belief, and their first allusions to it are marked by a scornful denial of its validity. Gradually, with the transition from physical to ethical inquiries, an approximation between the two is brought about, though not without occasional returns to their former attitude of hostility. Finally, in presence of a common danger they become interwoven and almost identified with one another; while the new religion against which they make common cause itself presents the same spectacle of metaphysical and moral ideas entering into combination with the spontaneous products of popular mythology. And be it observed that throughout the whole of this process action and reaction were equal and contrary. The decline and corruption of philosophy was the price paid for the elevation and purification of religion. While the one was constantly sinking the other was constantly rising, until they converged on the plane of dogmatic theology. By the very circumstances of the case an opposite course has been imposed on the development of modern philosophy. Starting from an intimate union with religion, it slowly disengages itself from the compromising alliance; and, although here also the normal course of ideas has been interrupted by frequent reactions, the general movement of European thought has been no less decidedly towards a complete emancipation from the popular beliefs than the movement of Greek thought had been towards their conciliation and support.

ALFRED W. BENN.

V.—CRITICAL NOTICES.

Philosophy and Religion. Selections from the Manuscripts of the late JAMES HINTON. Edited by Caroline Haddon. London: Kegan Paul, 1881. Pp. xix., 288.

This volume consists of excerpts from the earlier portion of Hinton's manuscript note books, covering the period, as the editor informs us, from 1856 to about 1861. The passages are arranged, not chronologically, but under headings devised by the editor, so as to bring out the several bearings of the main doctrine which runs throughout the whole, a purpose which seems to be well fulfilled by the division into Metaphysics: Nature known by the Moral Emotions: Mental Physiology: The Art of Thinking: The Self and Consciousness: The Bible: Holiness: Ethics. The fundamental ideas upon which the whole system is built become by this means far more readily discernible, and the student's labour is proportionally lightened. For this service the editor deserves our hearty thanks. And though the Author's Preface, which is prefixed to the volume, disclaims the idea that its contents convey a final view of his opinions—"they are not a statement of my thoughts, but a history of them, and present not the result, but the process"—yet this history itself has method and system in it, and the law of its movement is, in the case of a mind like Hinton's, of the greatest interest.

The circumstance which gives their unique value to Hinton's writings generally, and to the present volume among the rest, is in my opinion this. Being plainly and avowedly founded on religious and theological ideas, his system is nevertheless so framed as to satisfy the conditions of modern philosophical thinking, and does not require its disciples to clothe themselves in the rags and tatters of Scholasticism. It is requisite to a complete and final philosophy, that it should include theology as one of its divisions. No philosophy which failed to do this could maintain its title to the name. Now Hinton *begins* philosophy with this division; this is his avenue of approach. In doing so, he resembles the great mass of his philosophical countrymen, who have either a theological philosophy or none at all, and always approach philosophy through theology, never *vice versa*. But whereas others, owing to their theology, are Scholastic, it is Hinton's great distinction that owing to *his* theology he is not Scholastic but modern.

The difference between Scholastic and modern philosophy may perhaps be best expressed as the difference between holding and not holding the conceptions of Substance and Substantial Cause. Modern philosophy begins with the failure of Kant to rehabilitate these ideas in the shape of causal *noumena* or things-in-themselves. Any philosophy, even though based on Kant, which still brings in these notions, designedly or otherwise, is so far Scholastic. We now see no causality in matter; no causality in mind; no causality in noumena beyond

either or both of these. Cause is not a power residing anywhere ; it is a relation. The relation in which one thing stands to another is what makes us call one a cause, the other an effect ; not anything in the thing which is said to be a cause, as if causality was a property of it. It is the great service of Kant, that, while he failed to rehabilitate causality as against Hume, he yet showed us how, by a better analysis of the phenomena of thought, philosophy might be made independent of this and similar ideas. Not succeeding in himself rebutting Hume's scepticism, he opened a new mode of analysis by which it is rebutted. He first taught the world to look at the phenomena of consciousness as they are immediately known, and analyse them into their actual constituents. A great deal of otiose assumption was thus cleared away on the one hand, and on the other many new features came to light.

Nothing can put more forcibly the otiose character of both material and spiritual substance than the following sentence of Hinton's :—

"What is that 'I' that has consciousness? After all that question returns. Surely it is the same as : What is that thing that has weight? Take it away and leave the consciousness, and it is not missed" (p. 163).

Again he defines the self thus :—

"Is not this, indeed, an excellent definition of the self—the way we feel the absence of God?" (p. 171.)

Nor did Hinton leave the idea of substance any refuge in the ultimate ground of all things, as we shall see by another passage which I shall quote farther on. But first let us see what the main lines of his theory are.

Hinton's system is called by himself *Actualism*, a new word, with which, as he tells us in the Preface, he would gladly have dispensed, had it not been too much interwoven with his thoughts. "This term," he proceeds, "I gave, for convenience, to the general conception I had formed : it is parallel to idealism, materialism, positivism, &c., and was adopted to express the idea that all existence is truly active or spiritual, as opposed to inert or dead" (p. xiii.). And I think we cannot do better than follow his example by continuing to apply the term to that theory, the general meaning of which is clearly and concisely given in the first sentence of the present volume :—

"Men may adopt three views concerning the nature of the world. (1) That there is a material and an actual (spiritual), both truly existing, and necessarily with a certain antagonism between them ; this leads rightly to asceticism. (2) That there is only the material ; this being the true existence (at least to us), and such as we perceive it. There is (to us) no actual. This is positivism, as it speaks. (3) That the sole true existence is the actual ; and that this material, or real, is our way of perceiving it. This last is actualism (or positivism as it truly is), the practical inference being that we have to deal with the real, but on the principle that it is truly actual, if we could see it aright, getting at the true Being by leaving out the negation." (pp. 1—2).

Now at first sight it seems as if we had in the "actual" a noumenal Thing-in-itself ; and Hinton also constantly uses the term *noumenon*,

contrasted with *phenomenon*, for it. But really it is not so; knowability, not unknowability, is its essence. The language which Hinton uses, though misleading to those who are full of the Kantian Things-in-themselves, indicates merely this, that he did not speak on Kantian lines. Rightly or wrongly, he uses words of art in a meaning of his own, which is not their technical one. We have, he maintains, merely to place ourselves in the right attitude, and the actual becomes known to us. Take the following sentence from the chapter, "Nature known by the Moral Emotions":—

"It only needs to use our whole being in the induction, and then we know the actual. By sense alone we only know the apparent (not the *real*); by intellect alone we only know the abstract. Now taking both, and so bringing to bear a larger part of our being, we attain a better and truer knowledge, *i.e.*, of the real. But sense and intellect still are but part of us: by them we can of course only know the real—still the illusion, though not so merely an illusion as sense or intellect separately. But where is the moral nature? That which the sense alone learns cannot be true for the intellect also; that which the intellect alone learns cannot be true for the sense also: so that which sense and intellect alone learn is not true for the moral being also.

"The definition of the actual now is: that which is true for, which answers to, the whole being of humanity; that which will bear investigation by sense, intellect, and moral being, the latter correcting the former two, even as they correct one another. It is that which is learned by the joint action of sense, intellect, and moral nature" (p. 53).

Exactly so. That is modern and not Scholastic. The moral feelings have the same right to count in our idea of the objective world, as the feelings of the senses have. They equally depend on modes of motion in the organism, only they are more difficult to test, as standing in a remoter and less direct connexion with the external environment. To distinguish between the sensations and the moral feelings, and call the object of the one *matter*, and that of the other *mind*, is a rag and tatter of Scholasticism. Whatever is not matter in motion is consciousness; when conceived as dependent upon matter in motion, it is mind. Now sensations with all their modes of pleasure and pain, physical pleasure and pain as they are called, are states of consciousness, and if dependent on an organism are states of mind. No more and no less than this is true of moral feelings, with their pleasures and their pains. All feelings alike contribute, in their several ways and degrees, to give us a knowledge of what the world *is*, that is, of the value and meaning of the abstract mechanism of matter in motion, upon which they are conditioned. Light is not a fact and love a fiction. Both are fact or fiction equally, at any rate, call it which you will. But if you say *fiction*, then ultimately the material mechanism must be a fiction too, on the same grounds. This seems to me the drift of Hinton's theory.

Closely connected with this is his view of the material world. "Matter," he says, "is a mere symbol or expression, without any meaning of its own, for some unknown fact. To deny it is no less absurd than to assert it: it is to be interpreted" (p. 38). Now it is

sense and intellect, taken together, which give us our notion of "matter"; and this, he says, is a symbol to be interpreted. Interpreted by what? By the moral nature. But it is impossible to give Hinton's full thought on this point, because the passages are too numerous, and taken separately too fragmentary. The following perhaps gives as much as any single passage can, but requires much supplementing:—

"This, that we see as physical, necessarily corresponds to the moral; because it *is* moral; it represents it to us in a lower form because we do not perceive the moral element in it. We suppose cause and effect, &c., not seeing that it is true action or love. The physical is the moral with the love left out; and therefore the form without the fact. All the physical palpably is just that—the form of the moral without the fact. So the law is as we see it; yet truly it is the very fact of love; the not-love which constitutes it "Law," is only in us. And so of all: so of the physical world; it is the very fact of love; the not-love which constitutes it physical, is only in us" (p. 63).

Observe, there are two things in Hinton's view. First, that we see "matter" as dead, inert (by which I understand him to mean its impenetrability), because *we* are dead, inert, not alive enough to see that impenetrability is a complex mode of consciousness, a complex *phenomenon*, which is therefore conditioned upon something other than itself. This is what any idealist might hold. Secondly, peculiar to Hinton, is this, that the deeper insight, which is required to see what the conditions are, is moral not intellectual, that if we had *love* sufficient to cast out all selfishness, we should see what "matter" really was. "Because in reference to our moral Being there is a 'not' in us, which there is not in reference to our intellectual" (p. 39).

Hinton is not idealist simply; his characteristic is emotional and moral, rather than simply intellectual, idealism. Those who have read Dr. Royce's able and interesting article "Mind and Reality," in the last Number of this Journal, will understand me when I say, that what Hinton brings is just the complement to the hypothetical universal consciousness of that article:—

"But our hypothesis is plastic. An ethical theory of reality, if such can be established, has but to speak the word, and our Universal Consciousness will be transformed into what he now is not, an active Spirit." (MIND XXV., 54.)

One theory says, there is for the intellect an universal consciousness, the other adds, that its nature is known to us as Divine Love. And the two theories coalesce in virtue of the doctrine, held in common by both, that the conception of reality given by a search for causes is subordinate to the conception of reality as of similar nature to our own consciousness. It is not necessary to hold farther, with Dr. Royce, that all objective reality, external to us, is a *postulate*.

Still it must not be forgotten, that no fully articulated system is to be found in Hinton. He warns us himself, in his Preface, that his thoughts are written down as they occurred to him, and that they

continually seemed to outgrow their expression, and lead him ever on and on. Moreover, we have, in the present volume, excerpts only from the earlier portion of his manuscripts. So that in saying, Hinton thought thus and thus, I seem as if I were substituting something inaccurate in place of the real and veritable Hinton; not to mention the many omissions which in a short article are unavoidable, some of them most important, as for instance his thorough-going Determinism, combined with Freedom, which is an essential characteristic of his theory (pp. 55, 69, 81-2, &c.). This, however, only makes it more necessary for readers to go to the book itself, and not rest content with a reviewer's account. It will well and abundantly reward the reading. For in saying that we have in it no completed system presented to us, it is by no means meant that the thoughts are not systematic. True, it is not a formed system, but it is a system in process of formation that we witness.

Another peculiarity must not be left unnoticed. It is, that Hinton does not stand upon and continue the strictly *philosophical* tradition; he does not look upon philosophical problems as determined for future investigation by the speculations of Hume, Kant, or other metaphysical writers. It is as a theologian that he approaches philosophy, or rather as a man with theological prepossessions. If I say that he philosophises by light of nature, it is only to add, that he is a remarkable and brilliant exception to the generally worthless character of that sort of philosophising. To professed philosophers on the traditional basis his speculations ought to be all the more welcome on that very account. He rises into philosophy, out of common-sense, science and theology; and thus gives an independent testimony to the inherent necessity of philosophy to thought.

I have said that Hinton's thinking is systematic, and I would add a word or two on this point. In all systematic thinking, certain general ideas or moulds may be traced, in which the thoughts run, to which the rest are referred as a norm or standard, and which we may call the reasoner's *apparatus logicus*. Two ideas of this kind stand prominent in Hinton's present volume. The first is the distinction between *nutrition* and *function*, drawn from his physiological science; the second is a sort of Hegelian *negation*, which he calls the "not". These two ideas are often applied together; but often they are used separately, to subsume under them, and so explain facts of experience. Thus, the accumulation of ideas and framing of theories are a case of nutrition, the storing up of energy and material; knowledge on the other hand is the interpretation of that store, the function of that nutrition, when we see, as it were, all round our theory, see how we came to form it, and to what it leads (pp. 5-6). Again, to see that the "not" is the essence of the physical is the interpretation of the theory that matter is real; the theory is a nutrition, and its interpretation by the "not" is its resulting function (p. 25). This is carried out in a great number of cases throughout the volume. Indeed the application of these two ideas may be said to be the backbone of the whole.

As to the "not" doctrine, the passage which seems to throw perhaps the most light upon it is one in which it is brought into connexion with the infinite, and is that to which I alluded above as showing how Hinton banished the idea of substance from his "actual" being :

"Reflect how 'infinite' is a merely negative term. We have come by familiarity to overlook this. It means inconceivable, the denial of everything by which we conceive. Saying God is not personal, not conscious, not moral, is simply carrying out into particulars this general statement that he is not-finite. We cannot conceive God as He truly is; yet if He were a person, or moral, or conscious, we could conceive Him. It is strange the reluctance there is to admit this; we seem to feel that by giving up as true in respect to God that which arises from limitation or negation, we are giving up His Being. God is none the less *not* these things that we are, because He is not so by being *more* instead of less. To a man to whom shadow is reality to say that there is no darkness, is to deny. Thus is it with us; when the darkness, the self-ness, is denied of God, we tremble, as if our God were being taken from us. But in truth, He cannot be God that *can* be denied; God must be such, the denial of whom is a contradiction in terms; if we could rightly see the case, we should see it so" (pp. 182-3).

And now in conclusion, what is the true position of this theory, and what may we fairly judge its merits and defects to be? Its position is this. There are two great divisions of philosophy; the first is strictly and soberly analytic of the phenomena of human consciousness, the second is synthetic or, better, constructive of the relations which connect the filling up of the finite world, which we see, with that of the infinite world beyond it, which is unseen. The first is the basis of the second, for the *fact* of the infinite is given in and with the elementary phenomena of the finite. Hinton begins with the second division, and what his theory requires as its complement is a strict analytical connexion with the facts of the first division. He is not without such a connexion altogether, but it is not fully worked out; it lacks, as yet, its sufficient analytical basis. But it is not on that account baseless. The connexion between the filling up of the two divisions is and must be of a practical or ethical, not of a purely speculative kind; and it is the *facts* constituting this ethical connexion, on which Hinton has seized. He is based on *ethical fact*. Begin where you like in philosophy, and you are doing good and sound work so long as you keep to facts, and do not make them the occasion of *a priori* speculation about other facts. They will be sure to find their proper place, when the complementary facts are in due time discovered.

This sobriety of treatment is one great merit of Hinton's philosophy. To show what I mean, I will contrast it with that of another philosopher, who may also be said to begin with the second division of philosophy, since he treats both divisions as one, and who also makes *negation* the pivot of his reasoning. Hinton contrasts favourably with Hegel in this, that, though he sees the universality of the "not," he does not attribute creative energy to it, or imagine that thought

produces phenomena out of its own law of negativity. Hinton's negation is not a noumenal energy but a phenomenal fact. It is the shortcoming of whatever is finite, compared to the infinite. He does not pretend to include the infinite in thought, as being its product, or dream that trying to comprehend it and failing are equivalent to comprehending. With Hinton the infinite is what cannot be comprehended; and finite and infinite are parents, not products, of negation. Thus, notwithstanding the close similarity of the two philosophies, in point of the negation-principle, their difference in that same point is far more essential than their similarity, and to my mind the advantage is entirely with the Englishman. Intellectually to comprehend the universe, and understand the law of the divine mind, is doubtless a magnificent idea. But magnificence is no sure test of truth. Here too the half is far more than the whole; a half, which is wholly fact, more lasting and more valuable than a whole which is half fiction.

SHADWORTH H. HODGSON.

The Metaphysics of the School. By THOMAS HARPER, S.J. Vols. I. and II. London: Macmillan, 1879, 1881. Pp. lxxx., 592; xxvii., 757.

II.

It is a relief to be allowed to pass from the supersubtle speculations that closed the section on Transcendental Goodness, to Book IV.—“On the Principles of Being”. The first sentence sets us at ease, for “by principles of Being are understood those universal judgments by which Being and its notes are represented”. The book, in fact, promises to treat of *principia cognoscendi*, or the ultimate grounds of our knowledge. Father Harper tells us these are either analytic and universal, or synthetic and empirical.

Amongst the former is “the Principle of Causality”. An analysis of the idea of contingent or inceptive being gives it; *i.e.*, it is implied in beginning and change. But scholastic cause is “outgoing activity,” and not the mere-invariable antecedence “of modern scepticism”. That only antecedence and succession are found in experience is not true, “for the universal persuasion of mankind affords sufficient evidence of the contrary”. But surely it is the business of philosophy to correct vulgar unanalysed opinion. Least of all must we swear by the *dictum* of master-mob. How is the something more found? By subjecting experience to the *intuition* of the *intellect*. And what is it when found? Of course, it is not any physical condition, or the sum of the conditions. Moderns and sceptics can find these without the aid of “the intuitive understanding”. It is “outgoing activity,” “efficient cause”. F. Harper asks, “Does the understanding of men in general intue efficient causation, or rather an emanation from the cause into its effect, latent underneath the phenomena of nature?”—and answers most emphatically in the affirmative. Very well; those

that cannot get "underneath" must be content to remain in invincible ignorance with Hume, Mill, and other good company.

However, we have not yet reached the citadel of the scholastic doctrine of causality. It is "the Will". "The fact of causal influx in spiritual being is attested by an evidence that has no rival in purely natural cognition, because the object is *immediately* present to human consciousness." "My will energises," and I know it immediately. "I simply intue the . . . fact that my will is the efficient cause." All I can say in reply is that I cannot find any "simple entity called myself," nor any entity called "will," nor any "causal influx," because I have not the special intuitive faculty: and, being outside the charmed circle of intuition, I only find a phenomenal self, and a feeling-of-effort which is phenomenal—sequent and concomitant phenomena only. These alone are my objects—and the subject is never object.

The rest of this chapter is taken up with a protracted search for the *ultimate* principle, and by the way there is much subtle controversy with Hamilton and others. Hamilton upholds the Principle of Identity. Mr. Harper finds the Principle of Contradiction to be "ultimate in order of reduction," and therefore "first in order of thought and genesis of science". But much time might have been saved by simply observing that these two are obverse aspects, each of the other. In ontological phrase accommodated to the nomenclature of the School, the affirmation of Being is the denial of non-being, and *vice versa*.

"Experimental Principles," *e.g.*, the law of universal gravitation, are next discussed. The question is, how is it possible for these judgments to assume an approximate or *quasi*-universality? How do "certain empirical judgments," founded on sufficient observation and induction, "assume a moral universality which makes them physically certain, and are thereby elevated to the rank of experimental axioms"?

The answer is, "By application of an analytical judgment" which is thus expressed:—"Those material entities which act according to the same physical law or under the same natural impulsion will ordinarily (*i.e.*, almost always), under similar circumstances and conditions, produce similar effects". But the qualifications, "ordinarily" and "almost always," obviously take this out of the category of true analytical judgments, which are universal and necessary by their very form; and show it to be a mere restatement of the problem to be solved in other terms, instead of what it professes to be, the condition of its solution.

Again, it is not analytical in the sense that its subject and predicate are identical. F. Harper takes care that we shall not mistake it for the *formal* axioms of "the uniformity of nature, or of the course of nature," in unfamiliar guise. It does not mean, the same that has happened will happen again under the same conditions: *i.e.*, A is A, the sum of the conditions is the sum of the conditions, the universe is the universe, whether taken in *stasis* or in flow, and whatever its

content known and unknown, and at whatever point of time past or future we suppose the instant of attention and conceptual arrest to occur. In this way we might have an absolutely sure, because logical and identical, basis to offer men of science for their expectations and previsions and reasonable probabilities, and concrete empirical axiom of uniformity—something absolutely stable to stand on before taking their plunge, and, as Professor Bain has it, risking the future.

But F. Harper goes quite another way to work to make good Prop. 125—not analytically but constructively, not metaphysically in the proper sense but theologically. He postulates “God” to prove his *analytical* proposition! Physical law implies a Lawgiver: “and our conviction as to the constancy of physical laws rests on the infinite wisdom and unchangeableness of the great Lawgiver”. The protest must be again entered here, that it is not competent for a metaphysician to beg and borrow from a church-creed. The attempt betrays weakness and poverty, and once more we find the School figuring as a mere pensioner of the Church.

This way of philosophising has its advantages however. The exposition is complicated, a seed of corruption is sown in the heart of it, but miracles are saved! For we have imported “God” into our argument, and with him “Freewill”; and “it stands to reason that he who of his own freewill imposes a *law* or order has the power to suspend it, or, if he pleases, to arrest the effect”. “For, though the nature or essence of an entity as such is immutable and not subject to the freewill of its maker, yet its existence is so subject, and *a fortiori* its natural acts.” Here again “essence” is separated from “existence,” and creation by freewill is assumed from the creed, and so room is found for the miraculous, and we understand the meaning of “almost always”!

As F. Harper, following his master, denies the possibility of *a priori* synthetical judgments in Prop. 127, he has to deal with Kant, and he lays siege to him by regular approaches through Descartes, Locke, and Hume.

He postulates the practical infallibility of Reason, and denies the possibility of its criticism. The only quest of reason is “objective truth,” namely Being-as-such and the like; and it must take itself for granted without criticism. Accordingly, Descartes with his preliminary pretence of doubt was the father of all critical and sceptical philosophies, and will perish with the destruction that will overtake them, when the School comes to its own.

The position of Locke and “the sensists” is broken up and passed through by a single bolt from that engine we have found always at hand and ready for action—“the intuitive understanding”. Substrates, substances, and so forth are amongst things certainly known. There is a real ground for universals.

Berkeley and the idealists receive the same *coup de grace*. This instrument of war is irresistible—if you have it.

Hume appears to give more trouble. But the elaborate tactics here are only flourish and stage-effect. He might as well have been

brought down by the first shot. Yet F. Harper's exposition of Hume is more than fair. It is generous to a fault. It does not bring his weak points to the front, or when it does so, it fails to expose and transfix them. It does not strike at the individualistic standpoint which narrows Hume's speculation, nor the sensational atomism which vitiates his conclusions, preventing a vision of the world in consciousness as one perceptual *continuum*, and of the search for causes as necessitated by the conceptual breach of this continuity, and leaving him in the end with Mind and World as mere accidental bundles, without bond, of discrete atoms of feeling. On the other hand, F. Harper stigmatises what is convincing in Hume, and has found acceptance with all but the School and the post-Kantian ontologists—namely, his world as representation or phenomenon, "belief" as an irreducible radical of mind and ultimate ground of knowledge, his repudiation of such entities as "cause," "power," "force," "faculty," "will," his affirmation that "the principle of individuation is nothing but invariableness and uninterruptedness of any object through a supposed variation of time," and his "idea of existence" as "the very same with the idea of what we conceive to be existent".

F. Harper's account of Kant is also fair and very complete, though he warns us that, as mere ideology and theory of knowledge, "*The Critique of Pure Reason* can only claim the notice of the metaphysician partially and indirectly"! His animadversions on the ambiguities in Kant are acute, but need not detain us, as they are not new. He remarks, of course, how Kant plays fast and loose with things-in-themselves. When, on the other hand, Kant declares himself a thorough-going phenomenalist, he brings up his infallible artillery—"the intuitive intellect"—with result as usual, sudden destruction. Quoting Professor Caird (p. 108), he indicates a very fertile field of criticism on Kant, *viz.*, his confusion of analysis with genesis. He also points out the initial error of Kant, which, if insisted on, is fatal to the whole of his system. Kant starts like Hume with fleeting chaotic and isolated atoms of feeling. These strike the mind, *already there on the other side*, like a hailstorm, and to reduce this pelting chaos to unity and order and permanence, Kant has to furnish the mind with categories or innate forms of thought. There is individualism here, as well as atomism.

F. Harper sees this, and also appears to see that the Kantian syntheses are secondary—subsequent to and dependent on an analysis of the primitive synthesis or concrete *continuum* where thought and feeling interpenetrate, and content and form are found lying together in one. Kant then is only putting together what has been taken to pieces. All conscious synthesis presupposes analysis of the original synthesis—all reflective construction is reconstruction; and Kant's manifold, pure forms of perception, categories, &c., are only elements, products of analysis, in themselves inchoate. Yet strange to say, F. Harper does not see how this view tells equally against the School, and forbids all "*a priori* demonstrations," or constructions beyond the *continuum* or synthesis of experience. All such work is

at best only a clearing-up and making plain and distinct, and can present no new object or phenomenon.

While then we may be forced to conclude with the Schoolmen that there is no synthetic judgment possible *a priori*, for the elements of every such synthesis are products of a prior analysis of what is given in primordial synthesis in the world of continuous feeling in Time and Space; nevertheless, the concession avails them nought, so long as being naturally devoid of intuitive understanding, we are compelled to hold with Kant on the main point, that "all our intuition is nothing but the representation of phenomena".

Excepting an appendix on "The teaching of St. Thomas touching the genesis of the material world," the last 600 pages of Vol. II. treat of "Causes of Being in general," and material and formal causes in particular. Discussion of the appendix is better deferred, as F. Harper tells us it cannot be completely understood without a consideration of "efficient cause," which will have the third volume to itself, where F. Harper promises to fully unfold "the harmony that exists between the metaphysic of the School and the latest physical discoveries".

"Cause is a principiant which essentially and positively communicates being to another entity, or which produces an existing essence distinct from its own." It does all this "by virtue of positive influx". It is in its first act, when all or some of the conditions are wanting; in its second, when all are present; in its third, when it actually produces. Now I should say this little drama does not exist, for the first act is mere possibility or non-being, and the second and third collapse into one.

Then we are told that "the absolute entity of the cause is really distinguished from the absolute entity of the effect". But I take it that they are obverse aspects of one and the same. The effect viewed as possible is the cause: the cause viewed as actual is the effect. The event is the sum of the conditions, and *vice versa*. A single condition or any number of conditions short of the sum may certainly antecede the event, but are not the cause, only elements of the cause. The whole cause is the effect or event, and *vice versa*. A twofold distinction given in two different points of view is not the affirmation of two absolute separate entities. Here again the fatal error of the School is at play, which separates to distinguish, and distinguishes to divide, and confounds inchoate elements or contradistinguished aspects with separate concrete things.

Though the definition of cause is wide and vague enough, it is difficult to see how it covers so-called material, formal, and final causes. Matter or content, and form are *principia essendi*: "final cause" is obviously *principium cognoscendi*: and "efficient cause" alone is *principium existendi*, or "principiant" in the sense defined above. It is a pity that we cannot all agree to confine the use of the word "cause" to this last. F. Harper sometimes appears to see this in respect of final cause, but he is saved from any clear sight of it by his absolutism. The entity "Will" comes to his rescue. "The

purpose or intention as thought is a real entity . . . and capable of energy !”

“Material cause” is a very old friend. It is “primordial matter” or matter *per se*. We do not appreciate it because “metaphysical science, properly so-called, is a *terra incognita* to the men of thought and of education in our day. That which goes by the name is a sorry amalgam of logic, ideology, and psychology.”

Primordial matter is a “metaphysical” part of matter; but this affirmation is not to be taken in any “sorry” ideological sense. Matter primordial is an absolute entity discerned by the intuitive faculty. “It is a primordial subject of substantial changes.” When the Schoolmen try to envisage it, they are apparently contemplating blank space as indifferent to any particular changing content. At least only so can our mutilated minds imagine them trying to perceive it. I say so, because they appear to reach it by way of intuition rather than inference, and all their elaborate proofs are an afterthought. An inference as such for the mind that has inferred is a concept—*ens rationis*. But primordial matter is “real being”.

Further, “the material cause of all bodies is numerically one”. Here (p. 197) as elsewhere, the illustrations and secondary proofs from recent physical science—in this case from spectrum analysis—are irrelevant. For, if Mr. Lockyer is right in his prognostication, and there should turn out to be but one chemical element instead of sixty or so, this chemically unique matter would be sensible or perceived, existing in the plane of phenomena, and not below it; nor would it indicate or imply any primordial material unit “underneath”. This is a fair sample of how modern science and the metaphysic of the School are brought into line and reconciled.

“Form and matter are really distinguishable from each other as *thing* from *thing*.” The italics are F. Harper’s. Yet the second “*thing*” is “a purely passive potentiality or receptivity,” with “an entity and existence so imperfect that it cannot *be* without the assistance of the form”.

But here with the conception of matter-*per-se* as “potentiality,” we are thrown back again into the scholastic region of “possible beings,” already traversed and found empty.

The various physical theories of the constitution of matter do not really compete with the School-doctrine. They are not in the same arena, as they deal with sensible and “intelligible” matter only. F. Harper, however, gives them a good deal of criticism, but for the most part his shafts are not drawn from any distinctively scholastic quiver. He has simply collected the animadversions of many minds, ignorant of, or even adverse to, the School. These need not detain us.

We pass to “Form”. Form is to matter as act to potentiality. I suppose this means that the one is actuality, or real existing matter, and the other is its mere possibility and equal to nought. Yet “this substantial form and the matter are real physical parts”! If we doubt the existence of substantial forms, we are reminded that we

always carry one about with us, and have direct knowledge of it—*viz.*, “the me,” the soul; and it is a fair inference that all other bodies are “actuated” by substantial forms. There are many other proofs. Why else should curly hair refuse to keep straight, or straight hair decline to retain the impress of the curling-tongs? (p. 414.) Why do pink eyes and white hair go together in albinos; and how account for “correlation of growth” generally? (p. 415.) Why do stickiness, sweetness, and cubical shape cohere in sugar; and how account for other more recondite instances of such union, as given by Haeckel and Nicholson, &c.? (p. 416.) Again, for the short proof of substantial forms like bovinity and sulphuricity, see page 431.

But “the eduction of bodily substantial forms out of the potentiality of matter” is the grand doctrine that will harmonise the School and modern science (p. 459). The *deus ex machinâ* puts “seminal forms” and “certain powers active as well as passive” into primordial matter, and then brings them out again. That is really all that “education” means; though we are told in further explanation that matter has an appetite for actuality, that there is a “concreation” of matter and form, and that “education” is brought about “by virtue of a divine seal originally impressed on matter”. But perhaps men of science will understand better what is meant if they take F. Harper’s instance from chemistry. The form of phosphorus only exists potentially in bone-phosphates. By chemical analysis it can be educed out of the potentiality of the matter! (p. 497).

“The fecundity of God” accounts for the vast diversity of forms in nature: and “since there is a diversity . . . there must be a corresponding number of special dispositions in the matter”. So it turns out that the world-stuff never has been quite without form and void, but has been informed and determined all along by “special dispositions,” which any one can see are only the substantial forms under another name. This process of seeing double is another peculiarity of the School.

F. Harper here recommends to naturalists a new way of classifying. Let them base their systems on “substantial forms,” for on them depends “specific diversity”. “Specialisation of function” and “morphological type” are not by themselves safe guides, and hence the confusion and discrepancy to be found in biological works. But only get at “species,” *i.e.*, “substantial forms,” and you will find they never deceive you, and what is more, *never vary*. This last points to the short and easy way of the School with Darwinism. But is this the promised *Eirenicon*?

However, F. Harper tries again, and introduces “*interstitial* substantial forms” to conciliate evolutionists and believers in the unity of nature and the continuity of her history.

Copious illustration from natural history follows, and gives a colour of reality and naturalness to the factitious agreement with science. But scholastic compromise must draw the line somewhere, and so there is no continuity of “*interstitial forms*” between beast and man. In creation man was reached *per saltum*, for “a form must be wholly

spiritual" or the contrary, "though its faculties may be partly the one, partly the other"! Much to the contrary in *The Descent of Man* "looks like an ill-timed joke".

There is only room to mention one more attempt to throw a sop to science. It is the embryology of the School; which does not, however, allow any "identification of Ontogeny and Phylogeny," but only means that "man, as efficient cause of generation, can generate the lower forms of life, because his soul virtually and eminently contains them all under itself". Thus by the formative virtue in the sperm-cell, the form of the sperm-cell is driven out, and another form brought in, which in its turn is driven out and a third form brought in, and so on till the "animal" form is driven out, and the Creator introduces the spiritual human form! In condensing St. Thomas here, I have been careful to give his exact meaning, and embryologists must decide whether such an allegory throws light on their studies.

One pictures the little entities like pellets in that old-fashioned toy, the pea or popgun, where as each pellet of tow goes in, out goes the one before it. F. Harper refers to Haeckel's *Evolution of Man*, chap. xii., pp. 402-4, in corroboration of his story!

I venture to conclude with a well-known passage from Hume, which F. Harper seems to hold up to ridicule;—only premising that there is an omission in it due to the narrowing effect of Hume's individualism, and therefore about any book addressing itself to the understanding, I would put a third query:—Does it contain any subjective and reflective analyses of the content and form of consciousness? "If (says Hume) we take in our hand any volume of divinity or school metaphysics, . . . let us ask, Does it contain any abstract reasonings concerning quantity or number? No. Does it contain any experimental reasonings concerning matters of fact or existence? No. Commit it then to the flames; for it can contain nothing but sophistry and illusion." F. Harper's books, acute, ingenious, and learned though they are, only deserve a better fate, because they do occasionally contain some of these three things.

J. BURNS-GIBSON.

Text-book to Kant. The Critique of Pure Reason: Æsthetic, Categories, Schematism, Translation, Reproduction, Commentary, Index. With Biographical Sketch. By JAMES HUTCHISON STIRLING, LL.D., Foreign Member of the Philosophical Society of Berlin. Edinburgh: Oliver & Boyd; London: Simpkin, Marshall, 1881. Pp. xxviii, 548.

To a certain extent it may be said with truth that the more a philosophical author is studied, the less likely are students to agree in their interpretation of his writings. This is particularly the case when the author's name has, somehow or other, acquired an authority over men's minds, so that people are anxious to square their opinions by his rule, or at all events to exhibit them as the legitimate develop-

ment of his recorded system. No man's reputation stands higher in the world of thought at the present moment than Kant's, and accordingly it is not wonderful to find his professed expositors promulgating in his name the most diverse theories of the world. Kant, in fact, is rapidly being constituted a kind of philosophical Bible, in which, according to the often-quoted lines, every man successfully seeks his own set of doctrines. The "Illusionism," as it has been styled, of the most consistent Neo-Kantians, and the doctrines of the so-called English "Hegelians," not to mention other positions, are found invoking Kant's name with equal confidence. Now though this is in a sense natural, seeing that there are passages strewn up and down his writings to which the contending parties may appeal with much plausibility in supporting their claims to genuine discipleship, yet the practice is none the less to be regretted, as tending to remove historical landmarks. The real Kant would have been the first to disavow the positions attributed to him. The prevalent habit of substituting a *development* of Kant's doctrines—a development sometimes in one direction, sometimes in another—for the plain statement of Kant's own theory, has the additional disadvantage of diverting properly philosophical discussion into philological channels. When a theory is stated in Kant's name, the retort is always open that the doctrines in question are not to be found in his writings; and there ensues a dispute as to the meaning of certain passages, which rarely leads to any satisfactory conclusion. Philosophically, it really does not matter whether a doctrine is traceable to Kant or not: the point is whether the doctrine in question is maintainable with due regard to facts. It is desirable, therefore, in order that any theory may have its truth fairly tested, that it be stated on its own merits; and it is at least equally desirable that the genuine lineaments of the historical Kant should be once for all clearly discerned.

A "Reproduction" of this sort is, as I take it, the purpose of Dr. Stirling's present book. Perhaps it is not mere fancy that reads his intention even in the stern simplicity of the title—*Text-book to Kant*. The volume contains no adumbration of anything beyond Kant; it is Kant from beginning to end, and nothing but Kant. With laborious faithfulness and his own unique power of exposition, Dr. Stirling places the theory of the *Critique* before his readers precisely as it took shape in its author's head. Every effort is made to expound from the standpoint of Kant, and so to help the student over superficial incongruities of statement; but there is no attempt at throwing into the shade the real contradictions of the theory. Kant is presented to us with all his imperfections on his head, and we are apt to wonder, before the end, how he could possibly have believed his own theory; so plainly does it show as "a figment in the air"—"a house of straw" (pp. 488-498). In this respect, Dr. Stirling's faithfulness to his original may almost be styled merciless. Nevertheless, there is the clearest evidence that it was precisely this "figment," with which Kant supposed himself to answer Hume. Dr. Stirling's rehabilitation is, therefore, a contribution of the highest value to the history of

philosophy. He has done his work in such a way that it will never require to be done again.

The nucleus of the volume is a Translation of the constructive part of the *Critique of Pure Reason*, that is to say, of the Introduction, the *Æsthetic*, and the *Analytic*. In the last division, Dr. Stirling stops short at the end of the System of Principles, thus omitting the concluding chapter, on the distinction of phenomena and noumena as applied to objects, as well as the Appendix with its valuable criticism of Leibnitz, embodied in the doctrine of a transcendental Topic. The Appendix clearly lies outside of Dr. Stirling's plan; and his omission of the last chapter is evidence that, in his judgment, the general theory stands complete without it, and does not require to be modified by anything there said. Except so far as a reference forward to the noumenal world of ethics may be read out of the express limitation of the sphere of sense, there seems no reason to doubt that this is so. No fault can be found, therefore, with Dr. Stirling's good pleasure in stopping where he does, however much the purely English reader may regret the premature loss of his unerring guidance. The omission of the 'Refutation of Idealism' from the Translation (though that is made from the second edition) was scarcely, perhaps, well-advised. It is plain, however, that the omission has not been prompted by any *arrière pensée*; from his remarks in the Commentary it appears that he understands the 'Refutation' to refer to "actual transcendental things as external," and the whole of his own exposition assumes Kant's belief in the existence of such "things". He has omitted it, he says, "simply as so far hardly relevant, and not as wishing to indicate a judgment". As regards the merits of the Translation it is almost superfluous for me to speak. Thorough knowledge of German idiom and complete philosophic grasp have combined to give a rendering of Kant's words which faithfully reflects every shade of the original thought. To some it may be a disappointment that no uniformity is aimed at in the translation of recurring philosophical terms. Dr. Stirling warns us that, in this respect, he has availed himself of "a considerable latitude of phrase". This especially applies to such words as *Vorstellung* and *Erscheinung*; and when it is said that the latter term is sometimes translated "impression," the extent of the latitude claimed will be at once appreciated. But the Kantian terms take on their special meaning to such an extent from the context, that an unthinking literalism in translation is no guarantee at all that the genuine thought is thereby conveyed. Dr. Stirling's faculty of rendering thought is so eminent, that the reader may always rest assured that the "latitude of phrase" involves no distortion of the meaning, but quite the contrary.

The Translation is preceded by a "Reproduction" of the Kantian theory of perception, as laid down in the *Æsthetic* and *Analytic*, and is followed by an elaborate "Commentary". A word of mention is also due to the genial and quaintly conceived "Biographical Sketch" with which the volume opens. The Reproduction was executed, Dr. Stirling tells us, in 1862, and is "all that exists of the 'Exposition

of Kant' several times mentioned in the *Secret of Hegel* as prior to that work". The Commentary, which extends to nearly 200 pp., has been written for the present occasion. Both Reproduction and Commentary enforce the same view of Kant. The Reproduction is in many ways a very wonderful piece of writing; it is a fresh proof of a gift of living exposition such as has rarely been equalled. The argumentation is sometimes so close that in hands less skilful it would be in danger of becoming obscure; but in Dr. Stirling's it is merely terse. Every thought is so cleanly turned off, that there is not a single point in the argument which remains obscure. It is a high intellectual pleasure to read Dr. Stirling's clear and telling sentences. The reader may feel the unsatisfactoriness of Kant's whole mechanism; but he must feel at the same time that he has seen all its pieces, and how it was meant to work.

It is important, then, on all accounts to see the Kant that Dr. Stirling presents us with. He puts his position very strongly—but on the whole perhaps not too strongly—in the opening of the Commentary:—"What we are to see, then, is not a mystical, idealistic philosophy, but a mere physiological or psychological theory of perception, on the ordinary basis of common sense. . . . The common ground throughout is, as has been so often remarked by Kant's own countrymen, that of the ordinary Lockeian psychology" (346-7). In fact, it does not admit of doubt that, in the opening paragraphs of the *Critique*, Kant places himself, even verbally, at the standpoint of Locke. The question he asks himself is simply this—How must Locke's theory of perception be modified, in order to account for the universal and necessary judgments which we find in experience, but to which, according to Kant, experience in itself is not competent? Hume has supervened upon Locke with the proof that, if the mind is purely passive in perception, any connexion between matters of fact must be of a purely subjective origin and validity. Kant admits the cogency of Hume's argument, but refuses to recognise Hume's world as adequately representing the facts of the case. He takes his stand upon the *fact* of universal and necessary judgments, and proceeds to modify the Lockeian theory to account for this feature of scientific and every-day experience. If necessity cannot be derived from the side of the object, as Hume has shown that it cannot, then it must be explained by the contribution of the mind itself in the act of perception. In other words, we recognise in things only an universality and necessity which we ourselves place in them. Our perceptions are a compound of matter contributed by unknown things without us and form contributed by the mental faculties. Kant's "transcendental system" is simply an enumeration of the formal elements added by the mind with an explanation of the mode of their combination with one another and with the empirical matter of sense to shape any bit of rational experience. This system of *a priori* elements is Kant's answer to Hume; and historically Kant's intellectual theory appears simply as this answer to Hume's doubt about causality. It is strictly as such an (ineffectual) answer

that Dr. Stirling treats Kant throughout the present volume. The *Æsthetic* gives us the pure forms of space and time as perceptive universals, in which the units of sense are received and arranged. The *Analytic* adds to these the categories and the unity of apperception, by which, in combination, the matter of special sense, disposed in the forms of general sense, is worked up into a knowledge of objects. These objects are objective in the sense of belonging to one context of human experience, and so being the same to all; but they remain, of course, a strictly subjective manipulation of our sense-affections, when compared with the thing-in-itself that sets up these affections in us. As Dr. Stirling emphasises, Kant never doubted the truth of what Reid called 'the ideal theory,' upon the basis of which Hume, as well as his predecessors, had philosophised. Hence he necessarily regarded us as shut up to the knowledge of our own mental states. This being so, it is evident that the necessity which Kant imports into experience from the side of the mind has its limits very definitely marked out. The question of right or validity (*quid juris*), which Locke failed to put to himself, we have answered by referring certain perceptions and notions to the constitution of the mind itself. But the answer cuts two ways. As belonging to the mind, these principles of connexion have an unquestionable *jus* or validity within experience; but inasmuch as our mind is a mere blank without the matter of sense, it is a vain dream to think of employing them beyond the bounds of a possible sense-filling. They have been 'deduced,' or they have had their necessity vindicated, solely in order to explain certain features of the facts of perception. In short, the *a priori* is merely transcendental; and, as Dr. Stirling says, "to call a thing transcendental is the same thing as to say it has an empirical reference". The phrase "empirical reference" must be allowed to be the simplest and most unequivocal rendering of the term 'transcendental' that has yet been offered. In this way, Kant argues, the bounds of our knowledge and our ignorance are clearly discernible. We are eternally cut off from a knowledge of realities; but the orderly context of our own states, as dependent on sensuous affection, we can know with scientific certainty and precision.

Strictly speaking, there can be no cognition without the co-operation of the four factors mentioned above—special sense, general sense, the notions of the understanding and the unity of apperception. 'Perceptions without notions are blind;' that is, the objects in space and time which we seemed already to possess in the *Æsthetic*, are not really objects till the categories of the *Analytic* have acted. Imagination is the faculty or element that makes it possible to combine the results of these two parts of the *Critique*. "Imagination is the universal intellectual menstruum, the universal vehicle of mediation between sense on the one hand and the functions of apperception on the other" (98). Through the synthesis of the imagination the pure notions of the understanding coalesce with the manifold of sense, as arranged primarily in time and secondarily in space. Time, as the pure form of the inner sense, faces both towards intellect and special

sense-matter. The imaginative synthesis of time gives "multiples," or modes of connexion, in which the nature of the categories is sensuously reflected. By the application of any one of these "multiples" to any given complex of sense-units, the complex in question is raised from mere subjectivity into the objective perception of a thing or of related things. But when Kant says that perceptions without notions are blind, he does not mean to say that the absence of the latter is synonymous with an absolute blank. Whether he ought to have said so, is another question. His actual assertion only runs that notionless perceptions are, as it were, not focussed. The first synthesis of the imagination precedes the action of the understanding, and is, as Kant says, "a blind but indispensable function of the soul". In this way the otherwise indifferent units of special sense get arranged according to the pure perceptive forms, and become, in the strict sense of that word, a manifold, ready for the action of the category. 'Die Anschauung bedarf der Functionem des Denkens auf keine Weise.' "Perception, so far as strictly sensuous," Dr. Stirling translates, "stands nowise in need of the functions of the intellect." To express Kant's meaning here and in numerous similar passages, Dr. Stirling employs the antithesis of "crude and elementary" and "finished and complete" perception.

"Perception as opposed to sensation involves more than the mere *feeling* of the latter. . . . Perception, as perception, . . . is awareness of an *object*; and an object is always something that a subject conceives itself to discern as different from itself, but presented to it, offered to it, as it were, for inspection, held up to it. . . . But an *Anschauung*, a perception, is only crude and elementary when . . . the sensible details of it alone stand before consciousness. We may conceive the details of time and space always to stand elementarily thus, from the first, and in the background, *sensibly* before consciousness. That is crude perception. Finished perception, complete perception, is more than that: we have then an object before us, a house, a ship, a cannon-ball, a cushion, a glass, a stone, the sun, water, ice, the air. And each of these we can see to consist at once of details of sensation, as well as of details of perception; but all combined at last into a single unity, which is at last, too, only a unity of *perceptive* details—the very sensations have become perceptions."

Dr. Stirling adds a number of vivid illustrations.

"Suppose some new object be brought from abroad and put before you: you perceive it at once; and yet you confusedly feel that you do not perceive it, you confusedly feel this, in fact, till, on a sudden light, you exclaim, it is a basket, a drum, a knife, an oar, a club, or whatever else. Now if you recall that sudden light, you will find that it leaped from the collapse of the detail—the sensible many—into unity. What happened, indeed, was, that all the particulars of the perceptive detail, darkly and disconnectedly before you, sprang suddenly together into the unity and light of the universal—basket, drum, knife, oar, club. . . . We really do not *perceive* until by the help of a notion we also *understand*."

Kant allows a wide range to the crude or uncategorised perception. The imagination under self-consciousness takes possession of the units of sense by running through them and giving them continuity.

Kant supposes the imaginative synthesis to take place by the immediate action of the unity of apperception upon the manifold of sense; it precedes, as a first synthesis, the second synthesis of the understanding through the categories. Whether Kant is entitled, on his own principles, to separate the unity of apperception from the categories, which are its own forms or modes of operation, is again a further question. But Kant goes even further. He not only attributes to the unaided synthesis of imagination a spatial and temporal laying-out of units, which are afterwards to be struck into unities or objects by the category; objects, such as we usually mean when we speak of objects of sense, are supposed by him to be given in their completeness before the category acts. This is most apparent in the case of causality, which, as Dr. Stirling said ten years ago, though the very key of Kant's position, is yet his special failure. The examples Kant gives place his meaning beyond doubt. 'When the sun rises, the stone warms.' Uncategorised sense is competent to this judgment; it is only the further judgment—'The sun warms the stone,' that it cannot attain to. The first, according to Kant, is a judgment of perception, and is only subjectively valid; the second is a judgment of experience, and owes its objective validity to the fact that it has been subsumed under the category of cause and effect. But the question immediately arises—What induced me to give my subjective sequence of perceptions an objective reference? Why did I bring the category into play, and why the category of causality rather than some other category? The sole ultimate reason that can be adduced for my procedure is that I recognise a connexion of this peculiar kind in the empirical facts presented to me. "There must be a hint in the empirical succession itself, which determines when quantity, when quality, causality, reciprocity, etc., shall be the proper category to act, and subsume into experience. The empirical succession that is to be grouped under causality, for instance, cannot be the same as that which is to be grouped under reciprocity. The empirical variety itself must be furnished with a cue, must, as it were, blow its own prompter's whistle, before my judgment can be expected duly to subsume it into the appointed checker" (101). This inevitable admission on Kant's part Dr. Stirling has dubbed, very aptly, the "empirical instruction"; and the latter part of the commentary is largely devoted to a recurrent exhibition of the necessity, on Kant's principles, and according to Kant's own statements, of such "instruction" from the side of things. The remarks upon Kant's two examples under the Transcendental Deduction—the objectivisation of the house according to the category of quantity, and the objectivisation of the sequence of fluidity and solidity in the freezing of water by the category of causality—bring out very clearly the difference between the two cases. "Space actually *was* quantity, in bodily form quantity; but time is not causality, not in bodily form causality" (439). In the first case, therefore, there *was* really nothing to add; in the second case, the whole peculiarity of the sequence must either be added by the category, or smuggled

over without acknowledgment from the empirical matter. Nevertheless it is plain that Kant wishes us to treat the two cases as on the same level, and the imaginary parallel may even have helped to blind him to the real state of affairs. Kant wavers, in short, between the view of sense as a chaotic manifold, compelled into order by the individual's forms and categories, and the view of it as an empirically ordered manifold, in which all determination belongs to the object, and is simply recognised by the subject. Ueberweg, it may be remarked, points out this wavering incidentally in a passage of his *System of Logic* (§ 38, E. T. pp. 81-2); but Dr. Stirling drives the charge home. Only on the former view could the subjective machinery of the categories be of real use; and Kant's first thought apparently was that they functioned in that way. But the pressure of facts—nothing less than an incorrigible world of real connexions—drove him speedily into the second position, which is summed up in the distinction already quoted from the *Prolegomena* between judgments of perception and judgments of experience. We see Kant there compelled "to postulate a rule subjective" as "the cue to the rule objective". The subjective rule, to precede the objective, was undoubtedly, Dr. Stirling says, "his last shift". At the same time, it is not a special position assumed only in this place for purposes of fence. It is the position in which Kant must be said to have finally rested; and it is the only position with which, on the whole, his widely varying utterances admit of being reconciled. In Dr. Stirling's words—"The whole affair is, how an empirical connexion (which as empirical is pronounced contingent) gets raised into the force of an apodictically necessary connexion". And in the end Kant only claims "fictitiously to varnish the laws of nature that already empirically exist" (489 and 513). It is almost superfluous to draw the conclusion from this searching criticism. It manifestly "sists the whole business, and we have only ruins around us" (440). "What is interrogative in Hume is only affirmative in Kant! What Hume hands to Kant as the problem to solve, Kant simply hands back to Hume as the solution to accept" (455). In short, Kant's entire industry is reduced to "a palpable begging of the single question".

It will be seen from the above that though, in its author's words, the aim of the *Text-book* is "only understanding and not criticism," there is yet a very strong admixture of the latter element. All through the exposition, indeed, there may be discerned a latent polemic of the expounder against the system he expounds. This finds voice now and again in the articulate suggestion of difficulties, which are at first preliminarily met in the spirit of the Kantian theory. But as the artificiality of the construction becomes more evident, the doubts make themselves more loudly heard; and towards the end of the commentary Dr. Stirling fairly abandons himself to his critical mood. His criticism strikes at the root of Kant's whole system, namely, 'the ideal theory'—the doctrine of the exclusive subjectivity of our experience—and the presupposition which goes along with it in Kant, that necessity of connexion is incompatible with an origin in sense. Space

and time and the objects perceived in them are, for Dr. Stirling, not congeries of our own sensations arranged in spectra of our own manufacture, but the real world of things behind which there does not exist anything to know. Everything, he seems to say, is derived by the individual from sensation; but the sensations or impressions come to us *charged*, so to speak, with all that we afterwards find in them. They are "signs of things" (p. 508), and as such have to be interpreted. But interpretation would not be interpretation if it added anything that was not there already. There is perhaps some danger of Dr. Stirling's statements being taken by the hasty reader as the language of unphilosophical dualism, or Natural Realism, as the doctrine styles itself when philosophically dressed. But the mistake would be gratuitous. The claim to cognise reality in its necessary connexions is precisely the claim that is advanced by a complete idealism, which, because it is complete, is thoroughly at one with common sense.

I cannot conclude this notice of Dr. Stirling's *Text-book* without expressing the hope that after such a drastic exposure of the failure of Kant's general scheme to do what was demanded of it, he may see his way to supplement this volume by another. He has shown us with admirable skill Kant, as Kant conceived his own position in relation to Hume. A second volume should make equally plain Kant's positive function in the historical development of thought. What was the vitally new point in his construction which made it possible for a Fichte or a Hegel to arise? If I read Kant aright, the new departure was due to his exhibition of the Ego as the magnetic unity to which all knowledge is related, and (in Hegel's regard) to his idea of systematising the categories. To this it must be added that he reduced the dualism of 'the ideal theory' to such a form that at a touch the whole theory yields and disappears. The bare abstraction of the *Ding-an-sich*, or of sense as sense, was something that could not live. Kant's confusion between sense as the "sign" of a real world and sense as the pure negation of intellect (the correlate of the thing-in-itself) prevented him from recognising the abstractions in which he was dealing. But if sense be taken, as it plainly must be taken, in the first of these two meanings, then the connexions expressed by the categories will be found, as Dr. Stirling argues, in sense itself, and the whole transcendental apparatus, so far as it is a merely subjective provision, will become superfluous. Only, however, so far as it is thus subjectively conceived. If Dr. Stirling would undertake such a volume as I have indicated, laying sympathetic hands upon the really permanent elements in the Kantian theory, he would not only confer a great boon upon philosophy, but also obviate the possibility of a misunderstanding of his own position.

ANDREW SETH.

Immanuel Kant's Critique of Pure Reason. In Commemoration of the Centenary of its First Publication. Translated into English by F. MAX MÜLLER. With an Historical Introduction by LUDWIG NOIRÉ. 2 vols. London: Macmillan, 1881. Pp. lxii., 511; xxxii., 735.

The Centenary of the first publication of the *Critique of Pure Reason* has been well celebrated. Germany has given forth numerous addresses and commentaries; America has held a Centennial Meeting and delivered orations; in England, there has appeared a new and in some senses even authoritative translation of the work itself. Certainly no higher honour could be paid to the *Critique* than to present it now, a hundred years from its first publication, as peculiarly helpful, nay, as indispensable for the English student of philosophy, and no greater boon could be conferred on the English philosophical public than to supply to it a thoroughly trustworthy and effective version of Kant's great work.

In the two handsome volumes before us more is contained than the *Critique* itself. The substantial portion, a complete translation of the text of the first edition of the *Critique*, fills the whole of the second volume. In the other volume we have, in the first place, a preface by the translator, treating generally of the reasons which induced him to think that the work of translation ought to be undertaken and ought to be undertaken by him, and noting the aims kept in view throughout his laborious task; in the second place, a translation of a sketch of the history of pre-Kantian Philosophy, from the earliest period to Hume, contributed by Professor L. Noiré, and occupying 360 pages; in the third place, a translation of all the passages introduced by Kant into the Second Edition of the *Critique*.

One may be allowed to remark, without pre-judging in any way the value of any portion of these volumes, that it is to be regretted the plan of publication did not allow of the whole *Critique* being included in one volume. For only in this way could the book appeal to the class for whom it is of the greatest importance, those engaged in philosophical study, not as masters but as scholars. Prof. Max Müller, indeed, hints in his preface that his work is not intended for "professional students" who must, of necessity, resort to the original, but for a "large class of men and women . . . who still draw their intellectual nutriment from the philosophical soil left by Locke and Hume". It may be doubted whether much effect, if any, will be produced on the minds of such a class by the translation of the *Critique*, but it is certain that the division into the two classes of professional students and outsiders omits the very section which the translator of such a work ought specially to have in view. The principles of the Kantian philosophy can be expected to leaven English thinking only if and when the study of the greater Kantian works forms an integral portion of the usual philosophic training of the rising generation, and, under present conditions, a translation of the *Critique*, such that it can be used with confidence and freedom, is the most important auxiliary for elevating the character of our

philosophic instruction. "True students," says Prof. Max Müller, "would as little attempt to study Kant without knowing German as to study Plato without knowing Greek." But, it may be replied, even apart from the fair objection that not five per cent. of those who study Kant can hope to have such command of the language as is possessed by a Max Müller, that such a mode of statement rests on a misconception regarding the order of study. A student is not at all points of his training a "professional student"; he does not read the *Critique* once and have done with it. He meets it at all stages of his philosophic progress, and subjects it to an ever-altering style of study. A good translation may be the only means whereby a first introduction is obtained to a kind of thinking of which otherwise he might remain in ignorance, and further may serve as a constant aid in later more matured study of the work. It is, under existing conditions, of such pressing importance that the Kantian method should form part of the normal training in philosophy and that the minds of students should be enlarged by contact with the Kantian ideas and invigorated by the systematic study of the Kantian masterpiece, that a translation of the *Critique* is not only desirable, but is to be demanded on grounds distinct from those on which translations of the great works of Greek speculation might be demanded. Were the latter, indeed, of such immediate utility as bearing on the problems of modern thought, if, e.g., the fundamental ideas and method of the *Metaphysics* of Aristotle were really of a significance for present thinking at all comparable to that of the *Critique*, and were the conditions of study the same in their case as in that of the Kantian works, translations of them might be demanded with equal reason and defended on the same grounds. It may be feared, therefore, that the form in which it has seemed good to Prof. Max Müller to give us his translation of the *Critique* will put an obstacle in the way of exercise of the influence it might justly hope to have. It ought not to have been impossible, and it would, we think, have been practically best, to include in the compass of one volume, to be procured separately, all the matter of the *Critique*. For the student, who is primarily appealed to by such translation, the extraneous matter making up this first volume is mere lumber.

As regards the choice of text to serve for basis of translation, a remark may also be permitted. Prof. Max Müller has given reasons, partly personal, partly general, for preferring the First Edition as the substantive work, and, no doubt, in a question of this kind, where personal opinion must have considerable weight, it would be hard to say that a decision either way can be final. Nevertheless, I think one may regret that the English translation, in its continuous portion (that making up Prof. Max Müller's second volume), does not present to the student the *Critique* in the form in which Kant himself was contented that it should rest finally before the world. Many valuable hints towards interpretation of the *Critique* are unquestionably to be drawn from what is special to the First Edition, and in particular the first treatment of the Paralogisms of Reason is both richer and more

thorough than what is given in the corresponding section of the Second Edition. Still the parts withdrawn from the First Edition were withdrawn by Kant himself, and they must be regarded, in relation to the *Critique* as a whole, rather in the light of commentaries than as integral members. Translation of them should certainly accompany translation of the whole *Critique* in its second form; but to place them in the supplement seems better to represent the relation of the two texts than the plan here followed.

A translation of the *Critique*, appearing at this date, when for some years past there has been, even in this country, earnest and strenuous study of the Kantian philosophy, both in the mass and in details, and when, consequently, a fair general knowledge of the fundamental features of the system and of its bearing on special problems may be safely presupposed, cannot but have a standard of criticism applied to it differing in many respects from that which would have served to judge of earlier attempts at transplantation of so original a product of foreign thought. In such a translation one has a right to expect not merely the mechanical accuracy which adequate knowledge of the two relative languages may yield, but that higher accuracy which can be obtained only if the mind of the translator is so saturated with his subject that he can trace from point to point, from sentence to sentence, the consecution of the thought that lies before him. A good translator of Kant must be at the same time a good interpreter of Kant. Not, indeed, that interpretation should ever be allowed to take the place of translation, but because translation with intelligence is simply impossible unless the precise significance of each sentence, with its bearing on the whole of which it forms part, is clear to the mind of the translator; and this implies that the translator is verily reproducing in his own thoughts the thoughts of his author. The Kantian text, it is true, makes no small demands upon the skill whether of translator or of interpreter. For the style, by no means so unmanageable as is currently supposed, is rendered difficult and in some places obscure by two somewhat opposed causes;—by the closeness of connexion in which the several parts of a complete thought stand to one another, a closeness not easily represented when the statement of the thought itself occupies some space; and by the continuous tendency on Kant's part to repeat, with ever new and slight modifications, some previously established thought, so as to guard it against undue extension or possible misapprehension. Moreover, while systematic plan and method are discernible in the *Critique* as a whole and in its leading divisions, yet, probably from a well-known historic cause, the successive paragraphs rather resemble transcriptions of Kant's thinking as it proceeds towards determination of his object, than expositions from the point of view attained. Rarely are the results expounded in systematic form. The successive steps in the development of each thought are chronicled as they are taken, and each new sentence brings in, as it were, from the surrounding thoughts of the writer, supplement, correction, justification, reference to what has been achieved, distinction from what is yet to be accomplished, and

so on. Only in the later portions of the *Critique*, in many sections of the Transcendental Dialectic, for example, and in the Methodology, does Kant's style acquire freedom or sometimes even expository power and elegance.

Further, if a translator of the *Critique* should now think it necessary to preface his work with some Introduction to Kant, such introduction, to establish a *raison d'être*, must have something to distinguish it from the manifold sketches of philosophy as a whole or of Kant's philosophy in particular that are otherwise readily accessible. No doubt, the distinctive feature of such an introduction must depend on the aim the translator has in view, but it must be regarded as a misfortune, if from a somewhat mistaken aim a useless kind of introduction is adopted. In our view, the presentation of the *Critique* for English students should either be accompanied by no introduction at all, or should contain a careful and minute study of the historic features of only those problems on which, as it is known, Kant's activity was at work in the preparation of the *Critique*. In other words, if there be an introduction, it should consist of an accurate statement of the problem of knowledge as handled by Locke and Hume on the one hand, by Leibnitz and the Wolffians on the other, and of a concise review of Kant's previous essays towards solution of this problem. Any general sketch, of wider dimensions, must of necessity be vague, and its substance ought, in justice, to be presupposed in the preparatory training of the student.

In his prefatory remarks, Prof. Max Müller has explained, to some extent, the aim of his translation. That aim, as above indicated, seems to us erroneously conceived. The book, to be really of value to the English public, should not appeal primarily to the class Prof. Müller has in view, but to the smaller class of students of philosophy. The reflection cannot be avoided that the idea of his special aim has somewhat disturbed the clear judgment of the genial translator. Assuredly it is not needful for him to offer explanations of the reasons inducing him to spend time over the execution of so laborious a task as the translation of the *Critique*. He has given much to the English public, but hardly any boon could be greater than a thorough and trustworthy presentation of Kant's classical work. All philosophic students, professional or otherwise, owe him a meed of thanks for the toil he has undergone in their service, and, if one may be allowed to say so, their estimate of the qualities required in the competent translator of Kant is such that no man need turn back his hand from the task under the idea that it may be unworthy of his powers.

With what Prof. M. Müller says of the importance, nay, the necessity of study of Kant at the present time, one would heartily agree, and the force of his remarks regarding the extent and kind of knowledge of German required to do justice to the *Critique* cannot but be felt, even though one would supplement them by reference to other no less essential qualifications of the translator. But it is to be regretted that he has deemed it needful, even for the uninitiated, to produce testimonials in support of Kant's claims to attention, and of

service to give the briefest summaries of Kant's work in relation to his predecessors. The sentences relating to Hume and Berkeley (I. p. xxvi), based, no doubt, on the corresponding remarks of Kant in the *Prolegomena*, are calculated to stagger the initiated and mislead the uninstructed. One should be on one's guard, indeed, in assigning value to any historic statement made by Kant. Such references are of interest as indicating his own state of mind, but for the most part are utterly valueless as historic expositions.

So, too, one cannot but describe as a *mauvaise idée* the notion of the filiation of philosophical systems (I. p. xix) which has resulted in the acceptance of Prof. Noiré's historical sketch of all previous philosophy. In the 360 pages occupied by Prof. Noiré the entire fortunes of philosophy are delineated in historic pictures, in the broadest outlines and with the use of rough brush and strong colours. It is not our wish to speak disrespectfully of Prof. Noiré, who indeed is otherwise known to us through only one of the considerable number of his works. From such slight knowledge, one would not have been inclined to accept any historic sketch by him as certain to be of high value. But in the testimonial here accorded to him by Prof. M. Müller (I. pp. xix-xx) stress is laid upon a special point, *viz.*, possession on the part of Prof. Noiré of very complete knowledge of the *ipsissima verba* of the great philosophers, and one is given to understand, by implication, that the historic sketch is to be a presentation of the essence of each thinker's results in his own terms. As to the value of any such sketch *in ipsissimis verbis*, there may be doubts; it is barely possible in the case of the Greek philosophers; it may well be deemed quite impossible in the case of the moderns; but that the history here given does not correspond to the implied description there can be no doubt. The style is of a rapid and somewhat tumescent character. In few cases are *ipsissima verba* given which go beyond or even come up to the common stock that has long passed into the possession of all writers of brief histories. The exposition is continuously interrupted by critical comparisons with the latest speculative ideas, and generally is so coloured by reference to these ideas as to become almost chaotic. The whole reads like history in a fever, and the resulting impression is that of whirling confusion. Prof. Noiré reposes far too much confidence in his philosophic guides, Schopenhauer and Lange, who obtrude themselves in every quarter, and in one case at least, in the account of Hobbes, has suffered himself to be misled into quoting, apparently as *ipsissima verba* of Hobbes, an abridged and faulty interpretation by Lange. The whole account of Hobbes, indeed, even to the quotations, appears to be taken from the *History of Materialism*.

Our concern, however, is not mainly with the merits of Prof. Noiré's work (though in passing one would enter a mild protest against the new term, *Henism*, with which he and his translator have enriched the philosophical vocabulary, and also suggest that some emendations of pp. 58-9, and 90, which are very obscure, might be effected), but with its appearance here as an integral portion of the English translation of

Kant. Under this aspect, it can only appear in our eyes as comprehended under the well-known definition of dirt, *matter out of place*. The very best sketch of the kind, and surely with an English translation of Schwegler to hand more was needless, is out of place as a preface to Kant's *Critique*. No book stands so little in need of a general introductory outline of previous thought. The student who is to derive full benefit from its study ought doubtless to have his mind well trained by acquaintance with the history of speculation, but what student could ever derive knowledge of a kind to be serviceable in the study of the *Critique* from a sketch in which the historian literally strides in seven-league-boots over the centuries of philosophic development! The history of philosophy and an historical introduction to Kant are entirely distinct.

Prof. Max Müller, then, seems to have been under a misconception as to the nature of the introduction required, and also, if one may say so without advancing detailed proof, to have over-estimated the merits of his collaborator's contribution. One need not therefore regret that the limits of space rendered impossible the farther insertion of Prof. Noiré's analysis of the Kantian philosophy itself (I. p. xxv.). When that analysis, which is promised in German, appears we shall be prepared to consider its value, and also the worth of the present sketch, which may, perhaps, be then in place as an introduction.

It now remains to speak of the translator's own share, by far the heavier and more important, in these two volumes, and here it must at once be said that we do not profess to have compared with the German text all the 885 pages that make up the translation. Some sections we have read rapidly, on others we have bestowed a minute and scrupulous study. On the foundation so supplied, a fair estimate may perhaps be formed of the value of the work.

On the whole the translation appears to us to be a faithful and excellent piece of work. It is, as might be expected, far superior to the other complete presentations of the *Critique* in English, those of Haywood and Meiklejohn, and generally the form of the work is such as to render it fit for use by English readers. The great difficulties attaching to many passages are very successfully overcome, and when Kant's own style becomes freer and larger, the English version acquires force and even elegance. The awkwardness and roughness, discernible in most attempts at reproduction of Kantian German in English dress, are almost absent from Prof. Müller's pages.

While acknowledging, however, the great merits of Prof. Müller's labours, and offering to him the thanks of English students for the good work he has executed for them, we are constrained to add that the ideal translation does not yet seem to have been attained. We have noted, in the sections more carefully considered, a certain tendency to omit or to turn in somewhat loose fashion those connectives (adverbs or conjunctions) by means of which the transitions of Kant's thought are evidenced, an occasional slackness in the use of equivalents for technical terms, and, in more than one instance, mis-translation arising apparently from inadequate comprehension, not of

the words, but of the meaning. Without endeavouring to throw them into any systematic form, we would draw attention to the following notes, which illustrate some of the points of weakness in Prof. Müller's work:—

Vol. I., p. 491, lines 7-10: Want of attention to the position of the period has brought about an utter confusion. According to the translation Kant is made to say—"Metaphysic does not require these ideas for the sake of natural science; but, in order to go beyond nature, a right insight into them would make theology, &c. . . ." But in the text there is a period after the clause 'in order to go beyond nature,' which therefore refers to the preceding clause; and the words 'A right insight' begin a new and independent sentence.

I., 493, ll. 7-6 from foot: "but the identity of the subject of which, in all its representations, I may become conscious". According to our English idiom, *of which* here refers to *subject*; but, according to the text, the reference is to *identity*. The sentence should run thus: 'but the identity of the subject, of which (identity), &c.' The difference is of the greatest importance.

II., 65, l. 4: "collected members of the subdivision" should be the 'total members'.

l. 12 from foot: "intended knowledge"; better: 'the cognition in question'.

ll. 8-7 from foot: "all being contained within the whole sphere of the subdivided knowledge" is neither quite correct in meaning nor an exact equivalent for Kant's peculiar German expression, which may be rendered 'all together making up the whole sphere, &c.' The reference is to the exhaustive enumeration of the disjunct members of a whole.

II., 69, l. 11: "to a certain extent" is not a good version of "zu einem gewissen Inhalte".

l. 10 from foot: "Pure synthesis in its most general meaning gives us the pure concept of the understanding." This is a bad version, and probably would not have been given by a translator sufficiently alive to the significance of the Kantian philosophical terms. "Allgemein vorgestellt" must be translated literally, 'represented generally,' or more freely 'taken in its utmost generality,' while "gibt" should be translated 'constitutes'. The meaning of the whole is: "Now pure synthesis, when taken in its utmost generality (*i.e.*, viewed apart from all those modifications which actually are found in syntheses of various kinds), constitutes the pure category (notion of the understanding)".

II., 70, l. 14 from foot. A similar error appears in the version of "allgemein ausgedrückt," which cannot be translated, as here done, "in a general way". The whole sentence, indeed, fails to convey Kant's meaning, and from the punctuation it is impossible to discover the antecedent for *which*. Kant is not saying that the unity introduced by the function of understanding into the synthesis of intuition "may in a general way be called the pure concept of the understanding," but that this unity, "taken generally, is called the pure category".

II., 128, l. 3 from foot. "Comprehension" is not a good equivalent for "Inbegriff".

II., 132, l. 13: "blos erschlichenen Behauptung" is surely stronger than the version "purely gratuitous assertion"; rather 'surreptitious'.

II., 164, l. 9 from foot. The whole paragraph presents a mangled appearance. "Zustand" should not be translated by "condition". "Berichtigung" is probably better 'rectification' than "right understanding". But taken altogether the English version renders it quite impossible to follow the somewhat subtle distinctions of the German text.

II., 171, l. 7. "If experience teaches us" is quite an unnecessary freedom taken with the text "Wenn wir also erfahren".

II., 173, ll. 4-5. "Of that which one wished to predicate of the object." This is a sentence to make one gasp and wish to predicate something of the translator. Kant is asking what is the significance of the reference to an object which attaches to some of our representations. This, he says, cannot consist in their relation to another representation, "in der Beziehung auf eine andere Vorstellung," and then adds parenthetically "(von dem, was man vom Gegenstande nennen wollte)": 'of that which one would call (representation) of the object'. The structure is clumsy enough, but the meaning, especially if the following clause is taken into account, is sufficiently clear. Objectivity cannot be explained by reference to another representation, the representation of the object, for this, nevertheless, still remains *representation* and not *object*.

II., 173, l. 14. "On the other hand" as a translation of "umgekehrt" entirely alters the meaning and throws the whole sentence into confusion. The sentence, moreover, is one of the utmost importance.

II., 175, l. 8. The word "alone" occurring here must depend on some misreading. Perhaps for *allen*, which does occur, Prof. Müller has read *allein*.

II., 178, l. 16: "temporal relation of dynamical relation" is unnecessarily uncouth. The German allows, nay, insists on 'temporal relation of dynamical nexus'.

II., 179, last line: "exist" is not good for "liegen".

II., 182, l. 17. "Every change has a cause which proves (beweiset) its causality, &c."; "beweiset" should here be taken in its sense of 'makes good,' 'realises'.

II., 222, l. 10 from foot. A very curious error here obtrudes itself. "No objects can be assigned to noumena." Kant says nothing about noumena, and certainly the phrase has a very puzzling effect. Prof. Müller in translating has substituted "noumena" for the pronoun "den letztern," which does occur, but which refers to the previous distinction between sensuous and intellectual notions (not *intelligible* as here translated). 'No objects' then 'can be assigned for intellectual notions'.

II., 279, l. 11: "ought to determine". The German text is merely "bestimmen werden" = 'will determine'.

II., 309, l. 7. "A representation, which is only directed towards a person by the verb" does not seem to be an intelligible or correct version of "Vorstellung, die nur das Verbum in Ansehung einer Person dirigirt".

II., 311, 323. "Erscheinung" is twice translated by "appearance," which is rarely, if ever, an adequate equivalent.

II., 313, l. 12. "Matter" is evidently a misprint for *latter*, and in the succeeding clause the not unimportant word "innerlich" is omitted.

II., 314, l. 12 from foot: "permanent in that phenomenon to which, as the subject, &c." The arrangement of the words in the English version would inevitably lead to the conclusion that *phenomenon*, not the *permanent*, is the antecedent of *which*.

II., 315, middle paragraph. The whole is far from clear, and the meaning, not of the most evident, is obscured by omission of Kant's italics. The word 'necessarily' is left out of the last sentence, and is certainly required.

II., 317, ll. 3-14. This difficult passage is less intelligible in the English than in the German. "To establish personality" (lines 6-7) does not seem accurate.

II., 322, middle paragraph. The sentences are so broken up in the

English version that they fail to convey the sequence of Kant's reasoning.

II., 324, l. 9. The word "enabling" has no warrant, and is misleading.

II., 324, last line: "possibility of *existence*" cannot be accepted as translating "Möglichkeit des Beisammenseins".

II., 327, l. 3 from foot: "because they affect what we call the external sense". "Affect" is by no means to be taken here as translating the verb "anhängen," which is simply 'are connected with,' 'are related to'.

II., 330, l. 17 from foot. "Suggests" as version of "an die Hand gibt" is quite misleading, and introduces a foreign element into Kant's doctrine. Read 'supplies,' as the same phrase is translated on the preceding page.

II., 334, l. 11: "acquire cohesion in experience"; better, 'are conjoined in one experience'.

II., 340, l. 9: "In all practical questions". According to the text, the version should be 'In all the problems which may present themselves in the field of experience,' and considering Kant's technical use of the term *practical*, we are inclined to disapprove of any deviation.

II., 385, last sentence: "Nevertheless, when this subject is looked up externally, as an object of intuition, it would most likely exhibit some kind of composition as a phenomenon." The relative text is "Nichts destoweniger wenn dieses Subject äusserlich, als ein Gegenstand der Anschauung, betrachtet wird, so würde es doch wohl Zusammensetzung in der Erscheinung an sich zeigen". It appears to us that "looked up externally" is a bald and bad version of "äusserlich betrachtet," = 'treated (looked at) from an external point of view,' and that the words "so würde es doch wohl, &c.," may rather be rendered 'it would undoubtedly exhibit a composite structure in its phenomenal appearance'.

II., 59, l. 12 from foot. "Nichts weniger als systematisch" ought to be 'anything but systematic,' not "nothing less than systematical," which last phrase, if correct English at all, suggests the very reverse of the true significance.

We put forward these brief notes, by no means all that a careful scrutiny would yield, to illustrate the general remark that the translation now presented to us stands in need of a thorough revision from the philosophical point of view. Most of the sentences to which we object contain something which at once jars upon a student of the matter of Kant's *Critique*. Many sections of the work, on which space forbids us to comment, present in like manner small inaccuracies of punctuation, arrangement of sentences or rendering of connectives, which would also fall to be removed in the course of such a revision. While the translation, as it now stands, will easily supplant the other English versions, and may be read with both pleasure and profit, it does not yet satisfy the demands that may be justly made by the philosophical student. We venture to express the hope, that an attempt will be made to issue it in such a form as to be readily accessible to students, and that advantage will be taken of the opportunity so afforded for removing the imperfections which at present prevent it taking the highest rank as a classical version of a classical work.

R. ADAMSON.

A Sketch of Ancient Philosophy from Thales to Cicero. By JOSEPH B. MAYOR, M.A., Professor of Moral Philosophy at King's College. Cambridge University Press, 1881. Pp. 254.

This handbook, which makes an attempt, and with considerable success, to comprise within the bounds of about 250 pages the history of Græco-Roman speculation up to the eve of the Christian era, will do a service to the numerous class who have to train for examinations. It will probably convey also to the general reader a more precise and distinct impression than is easily attainable otherwise, both of the two moral treatises for which Plato and Aristotle are chiefly read at the present day, and of the doctrines professed by the Stoics and Epicureans. The little work is clearly written, full of details, rich in references, studded with dates, and, considering its size, amply varied by translation of the *ipsissima verba* of the ancient thinkers. Its moral and religious tone is thoroughly correct.

But whilst its adaptation to certain popular wants of the time, both inside and outside the Universities, may give it a temporary acceptability, its permanent value as a manual of ancient philosophy is in an equal degree lessened. The book cannot and does not disguise its original growth out of an Introduction to Cicero's *De Natura Deorum*. In consequence of this aim, the ethical and theological features of ancient thought are elevated to disproportionate prominence. And at the same time, the commanding position in which Cicero is placed gives what, on abstract grounds, must be treated as an exaggerated importance to the eclectic philosophies of the Post-Aristotelian schools, and enters on the muster-roll names which, apart from their bearings upon the labours of the Roman orator, might have been left to their repose in the erudite pages of more minute chroniclers. Hence arise results like the following. Two-thirds of the space allotted to Plato is occupied by a critical abstract of his *Republic*, whilst three pages describe his general philosophy. In the case of Aristotle thirty pages at least are given to an analysis of the *Ethics* and *Politics* (presenting *inter alia* a list of Aristotelian virtues, which, save for the omission of justice, would be more completely drawn out than Aristotle's own); while the logic, physics, metaphysics, and all the rest of the Stagirite's encyclopædia are disposed of in about 15 pages. And a curious instance of the same tendency to regard the *Ethics* as equivalent to Aristotle, is seen in the quotation, with approval, of a remark by Sir Alexander Grant: that "on *all* questions Aristotle endeavours to put himself in harmony with the opinions of the multitude".

In the account of the so-called Pre-Socratics there still survive remnants of views which, if they ever did service, have probably now become only misleading. Such are the attempts to institute a distinction between the Ionians and the Dorians in philosophy; the old habit of inventing a teacher and a pupil so as to complete the line of philosophical succession: and the violation of chronology which insists on placing Democritus before Socrates. More misleading, though less peculiar to Prof. Mayor, is the absence of any indication

that the speculations of these early philosophers rested on a more or less real basis of scientific observation : and that though in most cases their guesses about the vast unknown are all the memory which they have left, still, in the case of several, such as Anaxagoras, we know the scientific advance which determined and sustained their speculative ideas. Descending to minutiae, it may be noted that Aristotle did *not* style the early thinkers "drunkards," and that there is scant authority for the statement that Diogenes of Apollonia had to quit Athens. Indeed, generally there is perhaps too great readiness to state as certain fact many very dubious points in connexion with the history. Some of the translations from the Greek are questionably accurate : *e.g.*, that from Democritus distinguishing between "genuine" and "obscure" judgments, would probably be nearer the original if 'legitimate' and 'illegitimate' were substituted.

In the second period of Greek philosophy, we are met by the statement that "the general features of the Sophistic period are photographed in the *Clouds* of Aristophanes and in Thucydides' chapters on the Plague of Athens and the Coreyean revolution". Surely this is hard measures on the age of Pericles and Sophocles : and an unwise ignoring of Grote's rehabilitation. And is it right still to give as an historical explanation of the famous dictum of Protagoras the version that "what each man holds to be true is true for him"? In the case of Socrates it is good no doubt to call attention to his somewhat crude arguments from design (supposing, that is, that they are his arguments, and not those of a forger). But it is even more necessary in estimating him to call attention to what must have seemed, even to not very sentimental minds, his hard and crass utilitarianism, presented, as it is, so openly by his professed apologist, and potent, as it probably was, in drawing upon him the charge of a corrupter of the young. And on minor points, it may be noted that abstinence from marriage (witness Hipparchia) was far from being a characteristic of the Cynics : that the fondness attributed to Diogenes for speaking of himself as the Dog requires confirmation ; and that it is worth enquiring whether the Cyrenaics really conceived it as the business of philosophy "to estimate and compare pleasures and pains".

The analysis of Plato's *Republic* will no doubt be handy where there is not time or patience to peruse the original. But it may be doubted whether it is safe to say that Plato built ethics on the foundation of psychology, except in the sense that psychological facts supply the material for ethical laws. And when Plato's psychological analysis is pronounced defective, because it entirely omits the benevolent affections, it may be replied that Plato, treating of the natural endowments of the natural and individual man, did not find benevolence otherwise existing than through the influence of society. Plato's main psychological error was an utterly insufficient estimate of the sexual passion.

The account of Aristotle is fuller and more successful than that of Plato. But it is a doubtful compliment to the author of the criticism (in *Ethics* Book I.) on Plato's Ideas, to say that, though the arguments

are not very clear, their general purport is to prove that the "Ideal Good" is something unintelligible. Is the purport not rather to conclude (rightly or wrongly) that good and morally-good have little or no connexion with each other? And it sounds a remarkable criticism to say that the writer of the essay on Friendship (Love) omits benevolence: and to add that "the main defects of his system arise from his defective idea of our relation to God". Surely they arise more obviously from his misconceptions of our relation to our fellow-men, not to say to "barbarians".

The Post-Aristotelian period comes off best. Prof. Mayor gives a really good and useful account of the schools contemporary with Cicero. Sometimes perhaps (as in the exposition of a distinction by Carneades, which Sextus Empiricus appears to give differently in different passages) it might be wished that less room had been occupied by contested points. No doubt the Stoics, turbulent, ambitious, and arrogant, though they sometimes seemed to contemporary eyes, had a fine moral tone and dignity in their conception of life; and Epictetus at least has a reality of pathos which every honest heart reveres; but it is hard on the Epicureans to turn so persistently to the unfavourable aspects and issues of their doctrine. What in the Stoic is but a choleric word, in the Epicurean is rank blasphemy. It would almost seem when the letter of the dying Epicurus to Idomeneus is styled "an imitation of Stoic bravado," as if the Stoics had made good their claim to a monopoly of ideals. Even the Stoics however are obliged to conform to Christian ideas. When it is remarked (p. 168) that a saying like this "The life of the wise man is in no respect inferior to that of the Gods, except in duration" means to assert only "the doctrine of a Divine presence in the heart of man," one cannot repress the suspicion that Prof. Mayor has not fully grasped the antipathy between the Christian and the Stoic position.

The pages on Cicero are interesting, and it is a pleasure to hear stated the good points of that much-abused man. Yet in his estimate of Cicero's beliefs, Prof. Mayor perhaps loses sight occasionally of the fact that Cicero's faith is, like the chameleon, very much of the colour of that on which it feeds—generally following the sect from whose authorities he is at the moment translating.

W. WALLACE.

Das religiöse Bewusstsein der Menschheit im Stufengang seiner Entwicklung. Von EDUARD VON HARTMANN. Berlin: Duncker, 1882. Pp. xii., 627.

We are reminded by the advertisements swathing this volume that it is at least the 16th "des berühmten Verfassers," and that several of its forerunners have attracted the utmost attention and caused the greatest excitement in the Fatherland, fluttering the doves of Church, State, and University. The last and longest of them, *Phänomenologie des sittlichen Bewusstseins* was reviewed in MIND XIV.; and with that work the present one, resembling it in extensive and

systematic treatment, is also in its subject closely connected. *Die Philosophie des Unbewussten* had taught that the Omniscient Unconscious strives to attain in man the fullest consciousness in order to convince itself that positive happiness is a desperate quest, and thus disillusioned to procure freedom from pain or negative happiness by renouncing existence. The recent ethical treatise exhibited moral progress as the ever clearer recognition that Duty consists in furthering the purpose of the Unconscious Absolute. And the present work treats the history of Religion as an evolution of the consciousness that the same Absolute Divine Spirit is the true object of worship and religious service.

The exposition begins from the brutes. That wild animals have no religion is attributed not to their want of the requisite emotional basis, since the higher species display love, gratitude, humility, repentance, and other virtues, but rather to their incapacity of observing the natural phenomena most stimulative to religious feelings—the heavens, heavenly bodies, and meteorologic changes. Not that they cannot perceive these things, but, preoccupied by practical needs, they cannot regard them in the right way. Tame animals, however, especially dogs, appear to deify their master, and in proportion to his mental and moral superiority, his goodness and justice: not if he tease the would-be devotees, or associate with them too much on terms of equality. Thus to the brute, spiritual existence is revealed in another before a consciousness of it has arisen in itself, whereas the man can only discover the spirit in nature after having reached the conception of his own.

The man's understanding, occasionally free from the task of plotting to satisfy immediate wants, begins to direct partially disinterested observation to the heavens; which although at this stage of culture they do not directly concern him, yet indirectly may do so, and thus engage his curiosity. But as such an attitude of mind is too cold to awaken religious consciousness, we must consider his susceptibility to æsthetic impressions, especially the sense of sublimity. By a florid sketch of day and night and a turgid description of a thunder-storm the author seeks to impress us with the way the savage would be impressed, and observes that this æsthetic awakening gives the warmth of feeling characteristic of religion but wanting to mere curiosity. The æsthetic feelings are aroused not in their pure disinterestedness but perturbed by fear and hope; the storm is not only sublime but devastating; the morning not only beautiful but encouraging; and thus partially disinterested feeling associates itself with partially disinterested understanding. The heavens contemplated in such a temper are seen to be light-giving (a frequent attribute of Divinity) in contrast with darkness; imperishable in their cyclic recurrence, unlike plants and animals that die and return no more; still something besides resplendence and duration belongs to the notion of Deity. We see, however, that this something else is also implicitly present when we remember that the senses of the natural man are so suffused with imagination that—

“all the mighty world
Of eye and ear, both what they half create
And half perceive,”

is for him an inseparable whole, and all nature alive. He is a born poet and conceives of nature as the modern poet does. The appropriate objects of primitive man's religious consciousness, therefore, glorious and everlasting, are also conceived to live or, summing the last two attributes, to be immortal.

The gods thus created are not merely related to but identical with the sensuous objects that suggest them. Hence there are no idols until the second stage of religious progress, Zoomorphism, when imagination has confounded meteorology with zoology, seeing a snake in the lightning, in the scudding cloud a milk-shedding cow chased by a bull, in the horned moon a dew-shedding cow, and so forth. Zoomorphism everywhere precedes Anthropomorphism, partly because animals furnish easier comparisons with the heavenly bodies, but chiefly because to primitive man animals, exceeding himself in strength and swiftness, the only excellences he appreciates, best represent the power of the gods. It is only at a later stage of culture, when the use of weapons establishes man's superiority, that the human form is preferred for expressing the divine nature.

In representing the gods as beasts or as men, primitive man does not sunder them from the elements in which he first beheld them; nor from one another to the extent of denying their identity. To question whether they are one or many does not occur to him. Such arithmetical opposition, insuperable in our age of understanding, is not felt in the ages of imagination. The first state of Religion is not Polytheism but Henotheism. Whilst worshipping any single god, the natural man contemplates the godhead, not to the exclusion of the other gods, nor yet to the neglect of them, but rather—it is hard for a mere man of understanding to express it. The supremacy of imagination makes this attitude of mind possible, but it is also supported by a certain consciousness of the essential identity of the gods: not indeed a conscious consciousness of it, but an implicit unconscious divination of unity underlying the ostensive multiplicity. With a race inclined to mysticism the implicit unity may absorb the multiplicity and become Abstract Monism, as we see in Brahmanism. With a race prone to sensuous realisation the unity may be hidden by the ostensive multiplicity and a true Polytheism emerge: or if one amongst the many acquire supremacy, exclusive Monotheism results. The sense of the essential unity of gods expresses itself by the fiction either of relationship or of emanation: the former mode is most natural to the natural man; the latter belongs to a later period of reflection: the doctrine of the Trinity embodies both modes.

Primitive man's conception of his relation to the gods is determined by his selfishness; they may be useful allies or dangerous enemies, therefore are to be propitiated by prayer and sacrifice. But this egotistic view necessarily transforms itself into a moral one. He needs help chiefly against fellow-men, and as society advances, security against

them increasingly depends upon their observing certain rules of crude justice. Accordingly, on behalf of these rules he invokes the gods, and by the force of his wishes and by association identifies the rules with the divine will. He thus unwittingly endows the gods with moral attributes, connects their commands not with his own wishes but with the customs of his tribe, so that should he himself infringe those customs he must recognise that the gods are against himself.

Where Polytheism has established itself, it may exhibit a subordination of ranks, or all gods may be free and equal. In the latter case, if the subdivision of natural deity has gone so far that every mountain, river, and tree is a god, the perplexed worshipper having no other principle to direct his devotions to an object, pitches upon the nearest. And since the power of these local gods seems less than that of sun and storm, the worshipper's self-interest leads him to ascribe to his own river or hill invisible forces to eke out their apparent incapacity to assist and defend him. Such unseen powers rather than the natural object then attract the religious consciousness, and Dæmonism or Animism results. Belief in such dæmons is assisted by the belief, meanwhile developed from experience of dreams and trances, in the separate existence and immortality of human souls; hence also the worship of deceased ancestors. Fetishism results from the degradation of image-worship, when the worshipper's thoughts dwell on the image itself, oblivious of the god whose image it is.

The above abstract of Herr von Hartmann's first hundred pages on Naturalism suggests many difficulties. Neglecting the wild beasts and even the dogs, it is to be observed that the author attaches a very wide and vague meaning to the phrase "natural" or "primitive man". It seems to cover such different periods of culture as might take hundreds of thousands of years to succeed one another. He speaks of "the first form of natural religion, of which all mythologies more or less preserve traces, and which we see most clearly in the *Vedas*". But to an anthropologist the *Vedas* are modern compositions. When he says, too, that "the oldest languages are far richer than the modern in synonyms" he must mean "oldest" in a very qualified sense. For such a primitive man, however, great latitude of prevalence in time is needed in order to unite his extraordinary traits of mind and character. At the earliest dawn of religious consciousness, his disinterested curiosity about the weather is very enviable, seeing how much more important it must be to his nakedness than to us, not only in this unhappy isle, but even in balmy Berlin. Still we see that he was not quite unconcerned about it. As far as the author's argument requires him to have been so, he was; but in as far as it requires him not to have been so, he was not. The natural man's æsthetic impressionability, especially by the sublime, goes a step beyond it, and agrees very well with the warmth and phantasmic vigour of imagination which incapacitates him for distinguishing the living from the lifeless, and for which the author with unconscious irony compares him with the modern poet. For this imagination to identify lightning with snakes, and clouds with cows was easy; and a discursive reason

is provided to match. Accounting for belief in an under-world, abode of the dead, von Hartmann says:—"A simple reflexion teaches that if the Heavens are represented as world-embracing and all-comprehending, they must have another half remote from us". Explaining the prominence of the sun in mythology, he says:—"The simplest observation teaches that all the light of other objects, even of the sky and stars, is only borrowed sunlight". Perhaps so; but if these reflections are easy to primitive man, it is the more wonderful that he should get into the muddled state of mind which seems necessary to a sound Henotheist. That a creature of so much insight should not distinguish between one and many must be due to the unconscious teleology by which facts prearranged themselves in anticipation of the above theory. But such, we are to understand, was our ancestor's condition before the use of weapons made him feel his superiority to beasts.

The short paragraph in which our author explains the origin of belief in ghosts bears so much resemblance to certain chapters of Mr. Tylor and Mr. Spencer, that he can hardly be unacquainted with the doctrine that religious ideas arose from the worship of deceased ancestors. This view is a formidable rival of his own and similar ones: but he nowhere notices it. Perhaps he will follow up his criticisms of Mr. Darwin with a volume on *Wahrheit und Irrthum im Spencerismus*; and when it has appeared we shall wait with interest for the reply.

Let us now take the liberty to pass over four or five hundred pages which treat of the modifications of Henotheism amongst the Greeks, Romans, and Germans; its systematisation by the Egyptians and Persians; the Absolute Monism of Brahmins and Buddhists; and at great length of the development of Monotheism amongst the Jews, and the origin of Christianity: in order to arrive the more rapidly at von Hartmann's own views of the present condition and prospects of religion.

The God of the Semitic race, it appears, at first one with nature, gradually became transcendent; and to supply the immanent divinity thus lost the conception of the Spirit, Sophia, or Logos was introduced. As Logos (preferred for its masculine form to Sophia), it was identified by Christianity with Jesus; and the Son in whom mankind should be saved, thus constituted, was after some hesitation raised to equality with the Father. The difficulty of understanding how so many individuals could be saved in, or by participation in, Him, who Himself was a definite individual person, suggested the doctrine that it was by participation in the Spirit given by Him and the Father. Gradually the Spirit, to avoid materialising it, was personalised, and the Trinity completed. But by thus personalising the Spirit (though the process was never quite carried out), He was so far disqualified for immanence and mediation. The Church therefore began to interpose between the sinner and God the Virgin and Saints; that is, mere persons whose immanence was impossible, vain subterfuges which the Reformation swept away.

The orthodox doctrine concerning God is not that one person is

three persons, but that one impersonal God has three persons or aspects; in other words, the Trinity is a Henotheism with three persons. In addressing each person, the worshipper contemplates the whole Godhead. But since the objective work of redemption belongs to the Son alone, He has such a conspicuous position that we may call Christianity the religion of the Son as Judaism was of the Father. Christianity makes an advance on Judaism by its elevation, first, of the immanent Spirit to equality with the transcendent Father; secondly, of the immanence of God in man to the conception of a divine humanity: thus furnishing at once an active principle and an ideal to the religiously moral life. But the early Christians erred when in their fear of mixing God with Nature they personalised the Spirit and thereby severed God and man. Now at least when such confusion is no longer to be dreaded, to personalise the Spirit is needless; and freed from the limitations of personality it becomes capable of immanence in men, though still by its infinity and absoluteness transcendent. Thus just when Tritheistic Henotheism has become intellectually impossible, the Spirit is ready to supersede both the Father and the Son: the Father, by its identity with Him in respect of substance; the Son, because the Spirit by its immanence takes subjectively the functions of redemption, salvation and reconciliation, and makes an objective historical Saviour superfluous.

The Religion of the Spirit, then, is about to enter upon the scene of consciousness. Whilst former religions laid the burden of the tragedy of the world either upon the Gods, or upon men, or upon the Son of Man, in this the burden falls where in fact it must lie, upon the Universal Spirit, and upon those creatures in whom the Spirit approaches consciousness. Whilst former religions flattered our frailty with hopes of pleasure here or hereafter, that which is to supersede them all will know no such vanity. Whilst in Christianity the principle of religiously-moral life remained on the whole heteronomous, and salvation was by another; in the religion of the Spirit the living principle is truly autonomous, and the power of salvation is immanent in oneself. To this end the Spirit itself has led mankind. The development of religious consciousness is nothing but the process by which the Spirit gradually rises to self-consciousness. The religious object may now be described as Concrete Monism: an impersonal Spirit attaining personality in an infinite kingdom of divinised men. It differs from Theism by the impersonality of the Spirit; from Brahmanic Abstract Monism by the reality of the many persons in whom it attains consciousness. These other religions were co-ordinate approximations to the religion of the Spirit, which now reconciles and displaces them with the really last phase of the development of the religious consciousness.

What then is the religious consciousness? The book returns no adequate answer. Total disregard of Psychology is one of its chief defects; to which are greatly due both its general vagueness and particular shortcomings. The bizarre account of the mental qualities of beasts and primitive man has been noticed: a more pervading error

is the assumption that religious changes are the work of understanding and result from the detection of doctrinal contradictions; whereas the chief proximate conditions of such changes are not movements of thought but revolutions of feeling. As long as human feelings in relation to power, liberty, morality are unaltered, intellectual difficulties are prolific of apologetic hypotheses, but produce no reformation. Nay, rather than reform religion mankind will embrace systems of philosophy based upon explicit contradictions, and glory in doing so: though in philosophy, if anywhere, intellect should prevail. Controlled by feeling, many who have ceased to be theists embrace Pantheism to avoid Positivism: so that von Hartmann need not be surprised though the Omniscient Unconscious upon which his own system depends should not secure its immediate rejection.

Another defect which partly explains the insufficiency of his Psychology, is the author's superficial information about primitive man and his religions, and merely literary acquaintance with later races and their religions: but the latter need not be dwelt on here, since the Church is defended by many times five hundred champions better than the present reviewer, who will of course demolish von Hartmann if they think it worth while. For poverty of facts and direct evidence he seeks to compensate by ingenuity. The praise of great ingenuity cannot be denied him.¹ His book is a sort of challenge either to accept the theory it sets forth or to produce another equally ingenious. But most of us may fairly decline both alternatives: acceptance, for want of conviction; rivalry, for Protagoras's reasons, the shortness of life and the obscurity of the subject. Even the ingenuity must not be overrated by Englishmen. Whilst rarely attempted amongst us, to construct a philosophy of religion is a common German exercise. Lectures upon it go on every year in every University of the Empire, and treatises abound, supplying innumerable suggestions both of scheme and detail which render the undertaking much easier than our innocent countrymen are likely to suppose. For whether in Universities or elsewhere little more than the rumour of all this reaches us. Occasionally a popular preacher or writer of dangerous tendencies touches upon it, and astonishes his audience with short swallow-flights of rhetoric that dip their wings in German speculation and skim away. But interest is as transitory; and even amongst the educated anything deserving the name of information about the subject hardly exists. This is an example of our well-known inaccessibility to ideas and carelessness about applying them to the serious things of life. To our Philistine minds ideas seem important chiefly if true, and true only when proved. Hearing of endless speculations with little or no evidence we neglect them, and go on treating serious things in a serious way.

CARVETH READ.

¹ Nor can the praise of a good expository style; a little inflated, but clear and flowing: though with none of the genuine literary charm of Schelling and Schopenhauer.

VI.—NOTES AND DISCUSSIONS.

THE PASSAGE FROM STIMULUS TO SENSATION.

Nerves being essentially passages of communication between different parts of the body, and the events which take place in them being only in a limited degree amenable to direct experiment, it is not surprising that much of our knowledge of those events should be indirect, and based on observation of occurrences at the points where the communication finally arrives. Of such terminal points muscles have been by far the most important, owing to their visible and well-defined response to nervous stimulation; but the value of muscular contractions as evidence of nervous processes is much circumscribed by the independent physical properties of muscle itself, especially by the sluggishness which prevents its responding to more than a very limited number of the impulses that may be conveyed to it. But nervous communications pass inwards as well as outwards: is there no way of obtaining information as to the process of passage from the occurrences at the *inner* termini? At first sight the case here seems still worse; for not only we cannot get at these termini to examine them, but the precise situation of many of them is unknown to us; and even if we had them under our eyes, yet, since they are themselves made of nerve-substance, the molecular events which stimulation produces in them would be as much beyond our direct observation as those which take place in the nerve-fibres which conduct the stimulation. There is, however, a phenomenon connected with some of these inner termini, which, like the contractions of muscle, may serve indirectly as an indication of the events in the communicating fibres, namely sensation; that is to say, some quality of the sensation may enable us to draw conclusions as to the objective nervous events which lead up to it. The present Note contains a case of this sort, and may have some interest if only as showing that purely psychological observation may occasionally be necessary for the establishment of purely physiological facts.

The auditory apparatus, like that of the other senses, consists of an external part of which we know a great deal, an inner cerebral part of which we know next to nothing, and a communicating nerve. Now even if we allow a nerve-fibre to be capable of conveying in a second a number of separate impulses equal to the number of vibrations which correspond to high musical tones (and the greatest capacity in this respect ever suggested for it falls considerably below the number of vibrations corresponding to the highest tones)—the orthodox view still would be that the immediate nervous counterpart to the sensation is not a *quantitative* event corresponding in periodicity and frequency with the external stimulus, but some *qualitative* event, some chemical affection of nerve-substance, which, even if it be imagined to have some molecular periodicity of its own, presents therein no correspondence to the stimulus. The nervous affection of

course commences in the fibre conveying the impulse; the question how far *varieties* in the affection corresponding to *varieties* in the corresponding sensation (as of pitch) are represented in the fibre itself, or are confined to the changes in the central organ which the changes in the fibre bring about, we may postpone for a moment. (On the latter hypothesis we should have to suppose each fibre to have its extremity in the internal organ very definitely localised, as otherwise *similar* events passing up the several fibres could not produce *different* events corresponding to the different sensory results; just as a similar electric current passing up different wires, and capable of producing different results according to the distinct sorts of apparatus applied to the further end of the respective wires, could produce no difference of results if led into a general apparatus common to all.) But in any case, each outer terminal element is regarded simply as a *trigger*, which, when jogged, will send some mode of affection up the nerve-fibre, and be followed by a particular sensation when the affection reaches the central organ; the trigger being so constituted that it will be set in action by air-vibrations of a particular frequency, but this particular frequency being connected with it only *quâ* its mechanical office as trigger, and not in any way numerically represented in the upward impulse along the nerve. Each fibre, if it could be isolated and mechanically or otherwise stimulated in the middle of its course, would (it is believed) give rise to its appropriate tone, just as much as when stimulated *viâ* the terminal trigger.

Now as long as we look at the apparatus and its action only in their developed form, this may seem all pretty plain; but when we look at the process of development, it is otherwise. The difficulty is this. If we look at the two extremes, if we compare the set of objective stimuli (meaning by a *stimulus* any series of vibrations of one particular frequency) applied to the cochlea, and the set of sensations of tone to which they ultimately give rise, we find between them a most definite resemblance which exists in connexion with no other sense, in the fact that each presents a *perfectly regularly graduated scale*. The stimulus varies in the *frequency* of its vibrations exactly as the tone varies in *height*; the increase of the frequency and the heightening of the tone keep exactly parallel. Now we have just assumed that the vibration-frequency, *as such*, has no direct effect on the particular events in the internal organ which are the objective counterparts of particular tones; a particular frequency acting only by jogging the particular trigger, which is connected by an explosive fibre with the part of that organ whose stimulation corresponds with a particular tone. It seems to follow then that, when the variations took place which we suppose to have taken place in the development and differentiation of the sense of pitch, we have to imagine for each step of development *two independent variations*, one in the trigger, one in the nervous substance and liability to molecular affection of the central organ or the fibre or both; which variations, for all their independence, *present by accident an invariable correspondence*, in that the *stimulus* of the trigger and the *sensation* corresponding to stimulation of the central locality hold

precisely parallel places in their respective quantitative scales, in the scale of vibration-rates as counted and the scale of pitches as heard.¹ A trigger is developed capable of being jogged by air-vibrations of such and such a frequency : a certain bit of nerve-stuff is developed or chemically modified so as to give rise on stimulation to such and such a tone : and though there is no connecting chain of quantitative events between the two, yet it turns out that the vibration-frequency bears to all the other vibration-frequencies which can affect that ear precisely the same quantitative relation as the tone bears to all the other tones which that ear can hear. Time after time two things come simultaneously into being, each presenting a particular quantitative characteristic possessed by none other of its kind ; and in each case the two quantitative relations present a miraculous identity.

The identity is of course not really miraculous. Each quantitative event in the way of the variously-timed vibrations of the triggers must have a counterpart, differentiated so as to correspond to it in some *precise and invariable* manner, in the nerve-substance ; so that each particular vibration-rate may give rise to one particular chemical change or set of changes and no other. Not only so, but there must be a true *scale* of chemical events, however impossible it may be for us, in our ignorance of molecular processes, to imagine it. I confess that, when I try to make sense of this to myself, I cannot keep out the *quantitative* notion ; to me these precise and precisely graduated sets of molecular events insist on presenting themselves as truly *periodic* ; and I cannot therefore but regard the whole argument as telling conclusively *against* the assumed orthodox view.² But however that may be, we

¹ I have pointed out in the 7th chapter of the *Power of Sound* § 11, how discrimination of tones in respect of pitch differs from discrimination of colours or tastes or smells, in being a discrimination not only of qualitative but of *quantitative* differences, irresistibly felt as differences of *distance*, and capable of the minute measurement which results in a genuine and accurate *scale*. Thus it is only in connexion with the ear that the present difficulty would suggest itself in a perfectly definite form.

² Wundt, who holds the doctrine of periodic vibrations corresponding to the stimulus in the auditory fibres, and has attacked what I have called the orthodox view in several ways, has yet necessarily missed the above argument in favour of his view, owing to his denial of special modifications in the sensory centres. He carries his hostility to "specific energies" (*i.e.*, simply chemical differentiations) of nerve-substance to the length of asserting, without a word of justification, that such energies could never have been gradually developed, and so imply the absurdity of a fresh special creation for each of the special senses. He actually maintains that the possession of a terminal apparatus for starting nervous vibrations is the *only* reason why the auditory fibres alone act as a channel of sound : that is, he denies differences of structure and action in the various brain-centres so completely as to hold that affections of the centres for sight or taste would instantly be felt as sound, could the periodic stimulation be got to them. This view that it is solely the periodicity of the stimulation, apart from any peculiarity in the auditory centre, that constitutes the physiological correlate of sound, suggests among other difficulties the following,—that in the case of many non-musical sounds the *stimulus* is (according to Helm-

seem driven to one definite conclusion. We can only avoid the miracle above propounded by allowing no chain of *neutral and undifferentiated* nervous events, no intervention of explosions *lacking* the precise individuality of chemical character which corresponds to one pitch and no other, *between* the terminal vibrating impulse and the chemical events presenting this precise and individual character in the central organ: in other words, in the case of sounds of different pitch we must refer the commencement of the corresponding differences of nervous affection to the *point of connexion* between the trigger and the nerve, between the mechanical and the chemical events, and not to the parts of the central organ apportioned respectively to the different pitches. This would constitute a great difference from what the Young-Helmholtz hypothesis of three primary colour-affections (which is likely to survive Wundt's attack) drives us to imagine in the case of the eye; *viz.*, that the various nervous events corresponding to the delicate varieties of colour-sensation are composite results of several simple currents, and take place therefore only at the junction of these currents in the central organ. Further, if the molecular events corresponding to minute differences of pitch present their full differentiation and variety at the very outset, at the external extremity of the nerve-fibre, it may well be that mechanical or electric stimulation applied in the course of a particular fibre would not be able (as usually supposed) to start the peculiar method of action appropriate to a particular pitch. We might expect it rather to produce an undifferentiated sensation of sound; for it would not (as in the case of the optic nerve it probably would) have the seat of the characteristic action necessary to the more precise sensation wholly *internal* to it.

If I am right in the above argument, the difficulty of finding a causal link for the precise correspondence in the development of the mechanical and the chemical structures and events will be absorbed in the more general one, how precise and invariable chemical events in living tissue *can be produced at all* by stimulation so slow and mechanical as that of air-vibrations; differing as these do so radically from the ethereal vibrations of light, and from the direct chemical stimuli which originate tastes and smells. Till we understand in some measure how cause and effect are connected at the point of junction, we are scarcely likely to understand the delicate correspondence of their variations.

EDMUND GURNEY.

holtz at any rate) *not* periodic, any more than it would be if the nerve were mechanically stimulated in the middle of its course; and if Wundt tried to meet this with his theory that by constant response to periodic stimuli the molecules *on their own account* acquire a "disposition" to periodic vibration, which might thus be started even by a non-periodic stimulus, we answer, how could this apply to an infant a few days old, which nevertheless obviously hears noises? Had it only occurred to Wundt that this theory of gradual adjustment and disposition to periodic stimulation in the nerve-molecules of the individual might be reasonably applied to the evolution of the auditory centre through generations of organisms, the production at that centre of a "specific energy" amply sufficient for the purposes of the above argument might surely have suggested itself to him as at least a natural result.

LOCALISATION OF BRAIN-FUNCTIONS.

The question of the definite localisation of brain-functions—which concerns the psychologist directly, but also were it only because the physiologist cannot, or at least does not, treat it without making free use of psychological terms—has remained under constant investigation since it was last reported on in MIND XVIII. Some farther report is now necessary, not that the question has been brought nearer to a determinate solution, but because for the moment the researches of the two foremost investigators—Goltz in Germany and in this country Ferrier—appear to have resulted in a complete deadlock. It is enough to refer to the work of the two physiologists just named, for though Munk and others have obtained experimental results that differ from Ferrier's in detail, they cannot be said to raise any new question of principle.

Goltz, whose previous memoirs have been noticed in MIND (V., VI., XVIII.) as they appeared in *Pflüger's Archiv*, has all along held a position of exceptional strength. He was the first experimenter who kept his subjects (dogs) alive long after operating on them, and could thus distinguish between the passing effects of the operation and the permanent deficiencies of function (*Ausfallserscheinungen*) resulting from the different lesions. Ferrier's observations, set forth in his *Functions of the Brain* (1877), were open to the objection that they represented nothing but passing effects, since his subjects (monkeys) either died or were intentionally killed soon after the operations; and it would have been, on this ground, impossible to maintain them in their original form against the contrary statements of Goltz, had they not appeared to be supported by a steadily increasing store of clinical observations on human beings. Now, however, while Goltz, on the one hand, tells us in a new memoir (the fourth) in *Pflüger's Archiv* (xxvi., 1-49) that his own previous results have been absolutely confirmed by new experiments of a more accurate description,—on the other hand, monkeys treated as Ferrier treated them have been kept alive for periods of seven or eight months from the time of operation. Permanent deficiencies of function have thus been noted on the one side as well as on the other. The rival theorists have also lately engaged in a public discussion of their views, at the meeting of the International Medical Congress held in London last August, and a full report of the discussion appears in the *Transactions* of the Congress (London, Kolckmann) i., 218-43. Besides preparations, diagrams, &c., displayed on either side, Goltz exhibited alive one of his dogs which had lost the greater part of the upper cortex of both hemispheres, while Ferrier produced two living monkeys, one with extensive destruction of the "motor zone" of the left hemisphere, and the other with its "auditory centre" in each hemisphere extirpated. After the different effects contended for had been demonstrated on the living subjects, the dog and the first of the two monkeys were killed, in order that their brains should be subjected to closer examination. This has been carried out by a committee of independent observers,

who have already furnished preliminary reports, also printed in the *Transactions*.

Goltz's new method of experiment, as set forth in his last memoir, enables him to remove particular portions of the cortex with much greater exactness than before. He accordingly divides the accessible upper portion of the two hemispheres (behind the frontal convolutions proper) into four quarters—two anterior and two posterior, and removes them or any selection of them at will (approximately). The general results, so far as the question of localisation is concerned, are thus summed up by himself:—“(1) The hypothesis of circumscribed centres subserving special functions in the cerebral cortex is untenable. (2) There is no section of the cortex exclusively devoted to sight, to hearing, to smell, to taste, or to touch. (3) It is impossible by any limited destruction of the cortex to cause permanent paralysis of any muscle, or to withdraw it from the influence of the will. (4) The vital manifestations from which we infer intelligence, feeling, passions, instinct, do not depend on functionally distinct regions of the cortex. (5) Destructive lesions of anterior regions of the cortex cause deficiencies which differ in some respects from those caused by lesions of the posterior regions; the difference being perhaps explicable from simultaneous lesion of the underlying white fibres leading to the crura.” So far as yet made out, the difference amounts only to this—that while removal of the forward regions shows itself in clumsier movements and reduced tactile sensibility, removal of the hinder lobes more distinctly affects sight and the other specialised senses: and this concession, if it may be regarded as a concession, to the localisation-hypothesis is guarded by the suggestion that the ground of the difference is to be sought for not in the cortex itself, but in the underlying white tracts. The general intelligence is also somewhat more affected in destruction of the hinder lobes, but this result in Goltz's view must be ascribed to their larger extent; since it is always upon the *amount* of lesion (both hemispheres being involved) that he has found permanent deficiency of function mainly to depend. The deficiency is manifested in generally lowered intelligence with blunted sensibility; but even when the destruction is carried so far as to reduce the animal to perfect imbecility, there is not one of its senses through which it may not still be stimulated, nor one of its muscles over which it has lost control. So far indeed may the destruction be carried by Goltz's newer method, that in one case, he declares, he found the powers of movement, with some form of every one of the modes of sensation, remaining, though the brain as preserved after death weighed only 13 grammes, against 90 grammes as the normal weight of the brain, similarly treated, in a similar subject!

Ferrier, on the other hand, has found that his own earlier assertions of loss of particular functions in monkeys newly operated on apply equally to subjects that have long recovered from the disturbing effects of operation. The monkey, proved by autopsy to have lost nearly the whole of the motor area in the left hemisphere and no other part of the cortex, remained affected with motor hemiplegia of the right

side seven months after operation, while otherwise appearing in full possession of its normal powers. The other deprived of the strictly limited portion of one particular convolution (superior temporo-sphenoidal) in each hemisphere, which Ferrier from the first had fixed on as the "auditory centre," appeared to have lost all power of hearing and to have lost nothing whatever besides. Other confirmatory cases were adduced at the public discussion and are reported in the *Transactions* referred to above.

What is to be made of a conflict of evidence that seems as if it could hardly be more pronounced? Ferrier can only suggest that the discrepant results of Goltz are explicable from the lower organisation of dogs. Just as frogs can perform many complex and even apparently purposive acts after the removal of the hemispheres altogether, so he thinks that with greatly mutilated hemispheres dogs may still through lower centres remain liable to be affected and able to act in ways not possible for monkeys, much less human beings. Nor is the suggestion without point as against Goltz, who is ready to talk of his mutilated dogs as mere "reflex eating machines" and is not disposed to dogmatise as to the subjective character of that varied sensibility which he maintains is left after destruction of the cortical substance has been carried to the utmost accessible limit. The suggestion, however, by no means suffices to remove the difficulty. A dog is not so different in the conditions of its intelligence from a monkey that a wholly different relation may be supposed to obtain between the higher and lower brain-centres in the one and in the other. The cortical substances can hardly be indispensably necessary for the simplest re-action upon an optical or auditory impression in a monkey and quite superfluous in a dog; and the case is even harder to conceive, for, on Ferrier's view, it is one small fractional area of the cortex that is thus indispensable in monkeys for sight or for hearing. The newer facts adduced by Ferrier do nothing to obviate the objection that has before been urged against him in these pages—that he takes the brain for much too loose an aggregate of parts much too simple and distinct. That at any of the circumscribed spots denominated by him "motor" or "sensory centres," through all the thickness of the cortical substance, just one particular class of motor impulses or of sense-impressions is to be understood as organically provided for—is an assertion that would take one knows not what amount of experiment and clinical observation to prove. Goltz's conception of the intricate constitution and working of the brain, so far as he has yet shadowed it forth, must be said to come much nearer to meeting the requirements which psychology would make of physiology; and, so long as such facts can be produced as Goltz has recorded in his memoirs, it is hard to believe that Ferrier rightly interprets the different facts which he on his side may now be allowed to have established.

It clearly, however, becomes the duty of Goltz, in carrying forward (as he promises in his last memoir) the inquiry into localisation from his own point of view, to meet his opponent upon common ground and show (if he can) that the more developed brain of the monkey is also not the

simple congeries of distinctly circumscribed centres which evidently the dog's is not. Meanwhile, it is needless to dwell upon the circumstance noted by the committee of experts in the two brains submitted to closer examination, that the lesions in neither case have been confined to the cortical substance. Too little is known of the relation in which the white tracts in the hemispheres stand to the cortex to give ground for suggestions that can yet help to reconcile the discrepant results. It should only be mentioned that in both cases the basal ganglia appeared to be unaffected by the lesions from above. The discrepancy therefore—to call it by the mildest name—may be held as really affecting the brain proper and in the brain pre-eminently the grey cortical matter, which all are agreed in regarding as that organic structure whose functions are most immediately related to the processes of subjective mental life.

EDITOR.

HORWICZ ON THE ORGANIC SENSATIONS.

The *Vierteljahrsschrift für wissenschaftliche Philosophie* IV., 3 contains a careful study of the Organic Sensations (Cœnæsthesis) by A. Horwicz. The writer includes under this group of feelings "all those sensations which arise immediately out of the physical life, the proper vital processes, the temporary functions of the physiological apparatus without the co-operation of external impacts". He views these both as individual feelings, and as combining (as they mostly do) in a mass of inseparable feeling known as the "vital sense," &c. According to this double point of view he classifies them as follows. First of all come the Individual organic feelings, which are subdivided into General, or such as are common to all organs and tissues, and Special or such as are peculiar to certain organs. The first of these (the General) are further divisible into two classes, the Normal, which as a rule are not discriminated in consciousness, and the Discriminated. The Normal (General Organic) Sensations are, it is plain, shrouded in obscurity, since they do not stand out in clear distinction from others. At best they are "rudiments of feelings". The Discriminated group on the other hand are open to observation. These fall into External and Internal Sensations. The External consist of the (non-intellectual) feelings connected with the stimulation of the sensory fibres of the skin by pressure, changes of temperature, &c. It is in this sub-group, and more particularly those of pressure (which though arising indirectly from impact are supposed to have their immediate physical cause in certain internal changes), that we can best observe the variations of the discriminated general feelings according to the strength of the stimulus. These like all sensations are found to move within two extremes of a disagreeable too little and a painful too much. Thus the lowest stage of the organic feeling connected with pressure or the impact of some external body is the unpleasant feeling of Tickling. With a stronger impact comes the mixed sensation of Itching. Then follow the distinctly pleasurable

sensations which correspond to the range of stimulus where the discrimination of degrees of pressure is most perfect. Finally we reach the varieties of painful Sensation, such as Burning, Piercing, Stinging and Cutting Sensations, which answer to an excess of stimulation relatively to the condition of the organ. (In the case of temperature and chemical stimuli, the scale is not so well known, and not so complete.) A transition from the External to the Internal Sensations is supplied by the feelings of Tickling, &c., which occasionally arise in the absence of external stimulation. The Internal Sensations proper are those connected with the internal organs, which in spite of obscure details may be roughly arranged in a similar scale to that of the external sensations.

We come now to the second great class, the Special, the selected or "privileged" (*bevorzugte*) sensations. An organic feeling may be thus singled out and made distinctly conscious for such reasons as (1) the central importance of the organ, or (2) of the effect of its stimulation (that is, the extent of the resonance of the feeling due to nervous connexions), (3) special sensibility, (4) the extensive magnitude of the feeling or the range of its distribution in the organism; also for other reasons. Reason (1) is illustrated by the feelings of respiration (those connected with the action of the heart appear to contradict the principle): reason (2) by those of the organs employed in the preparation of blood: (3) by the sexual feelings: and (4) by the muscular feelings. A careful description of these various sensations follows. The sensations connected with nutrition and digestion are subdivided into three classes (*a*) local sensations of organs of digestion (as mouth-watering), (*b*) general sensations of digestion, those of satisfaction, pressure, nausea, &c., in which local feelings are not separated, and (*c*) general feelings of nutrition, including Hunger, Thirst, Satiety, &c., which, though in their beginning distinctly local sensations, in their more fully developed forms involve much wider regions of the organism.

After this study of the organic feelings as single sensations, the writer proceeds to view them *en masse* as making up the bodily Tone or Disposition (*Stimmung*). These collective states of feeling are distinguishable into genuine dispositions, or Cœnæsthesis proper, in which the individual sensations are completely lost, and such dispositions as receive special colouring from certain separate sensations, though these do not amount to discriminated sensations. The former are those states of feeling in which we commonly find ourselves; the latter are such states of feeling as arise when some slight local irritation produces a general feeling of uneasiness. It is added that certain classes of separate sensations, as those connected with the state of the sexual organs and of the muscles, serve through their range or that of their resonant effects to colour the whole disposition or tone of feeling.

JAMES SULLY.

DEFINITION OF INTUITION.

Intuition, like most other words of a similar formation, stands for one or other of three things—for a power, an act, a product. Sometimes, indeed, the product has been denominated a “singular concept” (in contradistinction to a *common* concept or *notion*), and sometimes an “idea of the individual”; but all concepts are, properly speaking, general or common—they have reference, that is, to classes or types—and the word *Idea* (as we shall see by and by) has been put to so many diverse uses that we are unwilling to accept it in any connexion where it can possibly be dispensed with. Better, then, leave the term in its threefold application than thus introduce further ambiguity and looseness: all the more so, as the ambiguity in any case is not very great, and we have the phrase “intuitive knowledge” to designate (where need is) the product, while the verbs *intuite* and *envisage* (neither of them perhaps very euphonious) can be brought into requisition for the act.

The primary signification follows the etymology. Intuition literally means—*seeing through the eye, visual perception*: and, if we draw a distinction between *intueor* in classical usage and its near synonyms *contueor*, *aspicio*, &c., we should say that in *intueor*¹ is implied *intentness* of observation, rather than bare seeing, and the English equivalents are—*view, gaze, look at, grasp, take in*. Accordingly, we find that *intueor* does not properly translate, ὁράω, θεάομαι, βλέπω, &c., but rather such Greek words as ἐμβλέπω, ἀτενίζω, &c. Visual perception, in like manner, attaches to *intueor*, the verb, when first adopted into philosophy; and it is prominent in the nouns *intuitus* and *intuitio*.² There is this difference, however, that immediate presence of the object is now the central fact, rather than intentness of observation, and the antithesis or contrast is to the visionary and the representative in imagination and in memory. Referring to dreams, Boëthius says (*De Consolatione Philosophiae*, Lib. iii., pr. 1)—“ad veram, inquit, felicitatem, quam tuus quoque somniat animus: sed occupato ad imagines visu, ipsam illam non potes intueri”.

If, then, we ask at this stage what Intuition is, we obtain as answer—the apprehension or discerning of a thing actually present to the eye; and it is distinguished, on the one hand, from the revival of that thing in memory or its copy in imagination, and, on the other hand, from the representations of dream-sleep and of the waking fancy.

But, in current philosophy, is there not something more, and some-

¹ The simple verb *tueor*, in the sense of *look at*, is mainly, if not solely, poetical: its prose signification is in the metaphorical meaning of *defend, protect*; hence the adj. *tutus, safe*. On the other hand, *intueor* is scarcely found in the poets at all. It is very rare in Horace; it is not employed by Virgil, except in *tmesi* (we speak under correction), it is unknown to Lucretius.

² Both *intuitus* and *intuitio*, as well as the adjective *intuitivus*, are non-classical. The last two are scholastic, and the first remounts at any rate to Boëthius.

thing different, implied? When the problem of the external world is in view, no doubt there is. Intuition is then used to denote an *immediate* perception of the external object seen, and the antithesis now is to the idea interposed between the percipient and the perceived—this latter being no longer absent as in memory, or unreal as in fancy, but actual and present, yet beyond the sphere of consciousness; or, if the non-Ego be regarded as a modification of the Ego, this modification becomes itself the intervening representation—it *suggests* the non-Ego. We have here the contrast denominated by Hamilton presentative and representative; and its characteristics may be seen fully drawn out in *Reid's Works*, Note B. Reference may also be made to an interesting Note on the same subject by Mr. D. G. Thompson, in MIND X.

There is but a step between visual perception and sense-perception in general: and so, intuition is not unfrequently applied to the immediate perception of the external, through whatever sense it comes—whether through the eye, the muscular sense, the locomotive faculty, or the touch. It was thus an appeal to intuition when Dr. Johnson offered his well-known and characteristic refutation of Berkeley; and a similar refutation has been offered repeatedly since Johnson's day.

Thus far external perception. But perception is also internal; and we intuit mental phenomena and mental facts, as well as external objects. In this way, immediate knowledge of present affections of the conscious subject is sometimes (though very abusively) said to be intuitive—such, for instance, as my consciousness at any particular moment that I am hot or cold, hungry or sated, pained or pleased: to which may be added perception of the secondary qualities of matter generally,—in which sense the elder Pliny frequently uses the word *intellectus*.

Again, Leibnitz has distinguished between *intuitive* knowledge and *symbolical* knowledge. The latter is knowledge through the concept; and the concept—being the common, the general, the universal—is neither an object of sense nor picturable in the imagination; it is obtained through comparison of individuals and abstraction, and is fixed in a sign or symbol. The former is concerned with what is immediately presented to sense or what is pictured in the imagination, and its object is always a singular or individual. In this connexion we have further to observe the distinction between the clear and the distinct among concepts. "A concept is *clear*, when the degree of consciousness is such as enables us to distinguish it as a whole from others . . . *distinct*, when the degree of consciousness is such as enables us to discriminate from each other the several characters or constituent parts of which the concept is the sum." This is the complement of the Cartesian doctrine of the criterion of truth; but the distinction itself, partially grasped, may be traced far back in philosophy.

A reference must here be made to Kant. In the Kantian system, every individual perception is an intuition, and the two universal conditions of intuition—the two forms of the sensibility—are space and time. This in German is *Anschauung* and the definition is well

given by Mansel in his *Prolegomena Logica* (p. 9 n.)—"The word *Intuition* is used in the extent of the German *Anschauung*, to include all the products of the perceptive (external or internal) and imaginative faculties; every act of consciousness, in short, of which the immediate object is an *individual*, thing, state, or act of mind, presented under the condition of distinct existence in space or time."

Once more, in mystical philosophies, Intuition takes a high and transcendent flight. It is now the immediate apprehension of the Absolute or Unconditioned; and, as such, is sometimes marked off by a qualifying epithet—as in the "Rational" or "Intellectual" Intuition of Jacobi and Schelling. This is, of course, an entirely different affair from the "Faith" of Christians. The Christian *πίστις* is not pantheistic, even when it assumes the form (in the writer to the Hebrews) —τὸν γὰρ ἀόρατον ὡς ὁρῶν ἐκαρτέρησε.

Now, looking back upon all these uses, what is it (let us ask) that they have in common? Omitting the last of them (which is peculiar), they all imply an act of attention, they all deal with the singular or individual, they all regard the knowledge derivable from intuition to be direct, immediate, or presentative, and so, beyond the reach of doubt or question.

But the uses are not yet exhausted. On the contrary, there is an application of the word to principles, and a special signification is given to it in Ethics.

In Ethics, intuition means the direct perception of the qualities or properties of actions—such as, their rightness or wrongness, their virtue or vice, their merit or demerit, their moral turpitude or moral beauty. This is, obviously, different both from the immediate apprehension of an external object and from the immediate perception of a mental state or fact. It is different also from intuition applied to principles or judgments. As *thus* applied, the word has reference to certain self-evident propositions (for a proposition and a judgment are only different aspects of the same thing, and there is no real distinction between a proposition and a principle—except in point of generality or width), and these propositions are found in mathematics, in metaphysics and in ethics alike—such as the axioms of geometry, the principle of causality, the maxims¹ of the conscience. Intuition is now more especially identified with Common Sense, otherwise denominated Reason; and the principles thus vouched for have been termed indifferently (though not without protest from some quarters)—first, ultimate, primary; innate, *a priori*, instinctive. Reason here, however, must not be confounded with the intellectual operation of that name, but must be taken as the equivalent of the Greek *νοῦς* and Kantian *Vernunft*, also of St. Augustine's *Ratio*, which is thus defined—"quidam mentis aspectus, quo, per seipsam non per corpus, verum intuetur". Indeed, in his *Inquiry*, Reid imagines Common Sense and Reason to be at feud, and speaks of them as needing to be "recon-

¹ Using the word maxim, of course, in the English acceptance, and not in the strict Kantian sense as opposed to law.

ciled," and in one place he emphatically opposes the two, and, with questionable taste (apart from the questionable philosophy), affirms—"Methinks, therefore, it were better to make a virtue of necessity; and, since we cannot get rid of the vulgar notion and belief of an external world, to reconcile our reason to it as well as we can; for if Reason should stomach and fret ever so much at this yoke, she cannot throw it off; if she will not be the servant of Common Sense, she must be her slave" (*Works*, p. 127 b).

As thus regarded, an intuitive principle, or (to express it fully) a principle the truth of which is intuitively apprehended, is one that is self-evident or unsusceptible of proof, and, therefore, irresistible or absolutely convincing: in other words, it commands assent,—we acquiesce in the truth of it instantly, instinctively, without the slightest doubt or hesitation. Brown defines it (*Lectures*, xiii.)—"a primary proposition, which we admit from the evidence contained in itself, or, to speak more accurately, which we believe from the mere impossibility of disbelieving it": and an "immediate" or "intuitive belief" he regards as a "direct belief," in opposition to, and in contradistinction from, "the indirect belief which attends the result of reasoning". Of course, Brown's language is not very philosophical or precise here, and special exception may be taken to the phrase "intuitive belief,"¹ for intuition (we shall be told) is immediate, and belief is mediate, so that the phrase is really a contradiction in terms; but the meaning is perfectly intelligible, if we take the phrase as elliptical (which in truth it is), and then intuitive belief means—belief that is the necessary and inevitable result of an intuition.

What then, as applicable to objects, qualities, and principles, is Intuition? In the case of objects, there is always a singular or individual (mental conscious state or outward existence), and it is immediately perceived or apprehended; in the case of qualities (ethical), there is not a singular or individual, but the perception is immediate or direct; the individual, in like manner, is wanting in the case of principles, but there is still immediacy of apprehension or perception: in all cases alike, there is, or is maintained to be, subsequent or concurrent assent, conviction, or belief. The points of community are sometimes expressed in the form of criteria or tests, and the tests commonly adduced are three. Thus (*cf. Brown, ut supra*):—an in-

¹ This form of expression was very common with a certain class of writers in the days of Brown, and much earlier in the days of Reid, &c. Thus, to take an instance almost at random, Lord Kames, in his *Elements of Criticism*, speaks of an "intuitive" or "innate conviction" of the veracity of the senses, &c. Hume's phrase (see Section xii. of the *Inquiry concerning Human Understanding*) is—"a universal and primary opinion," resulting from "a natural instinct or prepossession"; but, whereas with Kames the natural conviction is trustworthy and conclusive, with Hume it needs to be corrected, and is not unfrequently "soon destroyed by the slightest philosophy". Reid speaks of "instinctive beliefs," and his phraseology is defended by Hamilton, though Hamilton himself prefers the wording—"primary beliefs".

tuition is *universal, immediate, and irresistible*. Let us examine these tests, and try if, possible, to ascertain their validity.

Universal, strictly speaking, means—*not admitting of exception*. A generic mark, for instance, is said to be universal, because it applies to every one of the species belonging to the genus; and it is in this sense that Hamilton would seem to demand universality, when he lays it down as a criterion of Common Sense (*Reid's Works*, p. 754 b). "When a belief," he says, "is necessary it is, *eo ipso*, universal; and that a belief is universal, is a certain index that it must be necessary. To prove the necessity, the universality must, however, be absolute; for a relative universality indicates no more than custom and education, howbeit the subjects themselves may deem that they follow only the dictates of nature." But universality of this kind is, obviously, out of the question: it does not exist, and it could not be ascertained with absolute strictness, even supposing it did exist. The most that we can hope for, is "*general consent*"; and we all know that the worthlessness or worth of general consent depends very much upon the kind or character of the excluded dissentients: truth often lies with the minority; Carlyle says it *begins* there. General consent is at best only of *supplementary* value, it has not independent force; it is useful for *confirmation*, but cannot, standing by itself, *establish*. Moreover, the test needs to be applied *polemically*. Velleius so applied it in the *De Natura Deorum* (i. 17), for the purpose of proving the existence, the felicity, and the immortality of the gods: "de quo," he says, "omnium natura consentit, id verum esse necesse est. Esse igitur deos confitendum est . . . hanc igitur habemus, ut deos beatos et immortales putemus." But this very fact that the criterion needs to be wielded in a polemical fashion, is itself sufficient testimony that it is not absolutely convincing or weighty to the extent desired.

Much the same may be said of the third criterion—*irresistibility*. This is the counterpart of self-evidence; or rather, it is the effect, of which self-evidence is the assumed cause. But the cause here is simply inferred, it is known only in its result; and, as more than one cause might produce this same result, self-evidence as creative of conviction is not the power it might at first sight appear to be. As is well known, many beliefs are irresistible owing to "natural prejudice," others are due to education, others spring from habit, others still from tradition or deference to authority; and it should never be forgotten that cases of so-called intuitions—long-cherished, accepted for ages as such—have been proved to be "illusions". Moreover, irresistibility attaches to inferences as much as to intuitions, and we are as certain of the conclusion drawn from premisses rightly constructed as we are of the truth of any principle or proposition whatever.

The only test that is really of paramount importance, and that is applicable alike to principles, qualities, and objects, is the second of the above three, *viz.*, *immediacy*; and, as immediacy is of two kinds, the test itself is of two degrees or admits of a twofold application. Immediacy means either (1) directness or independence—*independence*,

i.e., of an intervening medium or a *tertium quid*; in which case it is opposed to what is mediate or indirect: or (2) it has reference to *time*; in which case it is the same thing as immediateness, instantaneousness, rapidity—including in it also facility or ease.

In the first of these applications, Intuition is commonly contrasted with Thought. Now what is the meaning of this famous antithesis? Thought is an ambiguous term. In its widest acceptation (omitting the Cartesian sense, which identifies it with Consciousness in general), it includes Perception, Conception, Memory, Imagination, Reasoning; in other words, is identical with Intellect, and covers one whole division of Mind (Will and Feeling being the other two). In its narrower sense, it comprehends simply Conception, Judgment and Reasoning. It is in this narrower sense that it must be here understood. Perception, Memory and Imagination are all alike regarded as coming under Intuition; for, although the image in imagination and in memory is representative, nevertheless, *as an image*, it is directly present to Consciousness and we immediately apprehend it; whereas the knowledge that we obtain through Reasoning¹ (Inference, Deduction, Demonstration, Argumentation) and through Conception is mediate, relative and dependent. We reach the conclusion in a syllogism, for example, not directly, but through the middle term; and the idea called up in the mind by a general name does not bring us face to face with the singular or individual simply, but with this considered as a type, one of a class, merely an example.

Intuition, then, is immediate; Thought is mediate. Can we thence infer anything as to the relative authority or superiority of the two? Can we say that the one, being immediate, is, while the other, being mediate, is not, to be implicitly relied on? Many have affirmed this; but not well. If one is, then both alike are "founded on an essential principle of our constitution," and both alike need to be checked and guarded. Moreover, as we have seen, Intuition implies attention; and, as attention varies in all degrees, intuition varies also: even Boëthius could distinguish between "*intueri*" and "*perspicaciter intueri*". Further still, intuition, standing alone, gives us only "an obscure and indistinct consciousness"; for a consciousness "clear and distinct," Reflection is required.

The other great antithesis is between Intuition and Experience. This is partly an opposition of the two as sources of knowledge, but partly also it has reference to the second meaning of immediacy above explained. Intuition now is assimilated to Instinct, and is indeed not unfrequently employed as its synonym. There is also in it something of the flash of inspiration; and it is further allied to impulse—only, we must exclude the idea of fitfulness. Experience, on the other hand, is conceived as "the daughter of time." It is the laborious process of learning and tuition; demanding time, repetition, testing, and whose results (in the form of acquisitions) have often to be corrected, if not altogether unlearned.

¹ For the distinction between Intuitive and Demonstrative knowledge, see Locke, *Essay, &c.*, Bk. iv. ch. 2., 17.

Is Intuition then, on this account, to be considered absolutely supreme; and are its dictates above and beyond dispute? It is not granted. The instantaneousness or rapidity by which intuition is characterised, is not necessarily a mark of infallible authority; for facility and instantaneousness characterise formed habits; and these adjuncts of a formed habit, unless they be on the side of virtue, are not considered a recommendation. Nay, instincts themselves are not necessarily unerring; and truth, in any sphere, is valid only when duly verified and tested. Neither Experience nor Intuition can monopolise infallibility: and so, between the two, in this respect, there is no just antithesis.

WILLIAM L. DAVIDSON.

VII.—NEW BOOKS.

[*These Notes do not exclude, when they are not intentionally preliminary to, Critical Notices later on.*]

James Mill. A Biography. By ALEXANDER BAIN, LL.D., Emeritus Professor of Logic in the University of Aberdeen. London: Longmans, 1882. Pp. xxii, 466.

John Stuart Mill. A Criticism: with Personal Recollections. By the Same. Pp. xiii, 201.

The biographical sketches of the Mills which appeared in *MIND* have been expanded by the author into these two volumes. Though they are so differently cast as to be fairly called the one a Biography and the other a Criticism, the Biography includes considerable notices of James Mill's varied writings, and the Criticism throws light on many passages in John Mill's life. The author's intimate relations with John Mill lend a special interest to the judgments he seeks to record on the character and achievements of his friend. He has been able to rescue many facts of James Mill's life when oblivion was just about to cover them. A very characteristic portrait of James Mill is placed at the beginning of the Biography.

The Development from Kant to Hegel with Chapters on the Philosophy of Religion. By ANDREW SETH, M.A., Assistant to the Professor of Logic and Metaphysics in the University of Edinburgh, and late Hibbert Travelling Scholar. London: Williams & Norgate, 1882. Pp. 170.

"After a short statement of the shape in which Kant left the question of the relation of knowledge to reality, the author proceeds to show how this metaphysical position was successively modified by Fichte, Schelling, and Hegel. Considerable space is devoted to Fichte's exposition of the principles of 'genuine criticism,' inasmuch as these form the common ground of the post-Kantian Idealism. This wider sense of the term Criticism, though beyond Kant's own horizon, is, in the author's view, the permanent result of the revolution which Kant effected in philosophic thinking. It abolishes the transcendental entities which all previous

philosophy had postulated as the causes of phenomenal existence and knowledge. There is no separation at this standpoint between the phenomenal and the noumenal, and the task of philosophy becomes therefore the statement of the fundamental rational conditions of the known world. The constructions of Fichte and Schelling are defective, in proportion as they fail to maintain this position of immanence or complete relativity. The superior consistency with which it is realised and applied by Hegel constitutes the most valuable lesson of his system.

The Second Part of the volume gives a full account of Kant's *Religion innerhalb der Grenzen der blossen Vernunft*, and a sketch of Hegel's Philosophy of Religion. The intimate connexion of Kant's works with his ethics is pointed out, and his main positions are criticised."

Essays and Dialogues of Leopardi. Translated by CHARLES EDWARDES. With Biographical Sketch. ("English and Foreign Philosophical Library.") London: Trübner, 1882. Pp. xliii, 216.

The enterprising publishers of the "English and Foreign Philosophical Library" not only now add to their previous announcement of a forthcoming translation of Hartmann's *Philosophie des Unbewussten* the promise of a translation of Schopenhauer's *Welt als Wille u. Vorstellung*, but give an interesting specimen of another phase of modern pessimistic thought in the present translation from Leopardi. The translator, besides producing a thoroughly readable version of pieces that must have given trouble, presents a sketch of Leopardi's life which throws no little light on the character of his thought, much as Leopardi himself protested against the notion that its pessimistic cast is in any way referable to his personal misfortunes and sufferings. The grim humour of the pieces will draw the reader on. This is how the translator sums up the philosophy embodied in them:—

"The universe is an enigma, totally insoluble. The sufferings of mankind exceed all good that men experience, estimating the latter in compensation for the former. Progress, or, as we call it, civilisation, instead of lightening man's sufferings, increases them; since it enlarges his capacity for suffering without proportionately augmenting his means of enjoyment."

Primer of Logical Analysis: For the Use of Composition Students. By JOSIAH ROYCE, Ph.D. (Balt.), Instructor in the English Language in the University of California. San Francisco: Bancroft, 1881. Pp. 77.

The interest of this little work lies not so much in what it accomplishes as in its aim. It is an attempt to present as much of Logic as may enable composition-students, without philosophical training, to use the forms of language for varied expression with consistency and precision. For this Logic is, of course, taken only as it is concerned with language—and so related to the sister-disciplines of Grammar and Rhetoric—not as it is a department of Philosophy. As effective composition depends so much on the power of saying the same thing over and over again in a variety of forms, or bringing out the varied implications of a first statement, it is plain that students of literary expression need a certain modicum of logical knowledge as much as of

grammar. It has always, indeed, seemed to us that an intelligent teacher might, in the course of grammatical lessons, communicate even to very young pupils a knowledge of these facts of logical doctrine that are of most practical value because most indispensable to any speaking creature who would be understood. Dr. Royce has not been content to utilise only the traditional scheme of logical forms for this purpose but has sought also to turn to the practical account of his composition-students the reformed schemes of the new Symbolic Logic. It may be doubted whether he has done quite wisely in leading students into the newer field before giving them the practical benefit of all that was to be gleaned upon the old. For example, a good deal more might have been made of the common doctrine of Definition. On the other hand, it must be allowed that he has managed in short compass to give a very clear presentation of the modes of logical statement adopted by some of the modern reformers; and even philosophical students of Logic will find many instructive hints strewed through these pages. The *Primer* has the appearance of a first sketch, which, it may be hoped, the author will both extend and fill in.

Metaphysics: A Study in First Principles. By BORDEN P. BOWNE, Professor of Philosophy in Boston University, and Author of *Studies in Theism*. London: Sampson Low, 1882. Pp. xiii., 534.

To judge by the very vigorously written Introduction, this work (just come to hand) ought to receive careful examination. It is a systematic treatise on Metaphysics as concerned with the true nature of reality and distinguishable, in the author's view, from Theory of Knowledge, which with it makes up Philosophy. Dedicating his work to the memory of Lotze, the author gives this account of its "pedigree":—

"Leibnitz furnishes the starting-point, Herbart supplies the method, and the conclusions reached are essentially those of Lotze. I have reached them, for the most part, by strictly independent reflection; but so far as their character is concerned, there would be no great misrepresentation in calling them Lotzian."

As to the manner of treatment:—

"I have divided the work into three parts whose titles are strongly suggestive of the ancient scholastic treatises on metaphysics. But this resemblance does not go beyond the titles; and these have been used as indicating better than any others the natural divisions of the subject. Ontology, or existence in general; cosmology, or cosinical existence and processes; and psychology, or psychical existence and processes, are the divisions which reflection upon experience immediately suggests. Of course, it is not expected to reach a knowledge of details by the way of speculation, but only to reach an outline-conception of reality which shall be valid for all details, and within which all specific study must be carried on."

La Parole intérieure. Essai de Psychologie descriptive. Par VICTOR EGGER, Maître de Conférences à la Faculté des Lettres de Bordeaux. ("Bibliothèque de Philosophie contemporaine.") Paris: Germer Baillière, 1881. Pp. 326.

An investigation of the phenomenon of internal speech, which the

author regards as one of the prime facts of consciousness, associated as he finds it with almost every event of the subjective life. While its importance was appreciated by Bossuet, Bonald and Cardaillac, it has not, he thinks, received sufficient attention from psychologists of the present day. The author maintains (in agreement, as he has later discovered, with Dr. Bastian against Prof. Bain) that the "internal word" is a purely auditory image. Its various forms and functions, in exceptional cases of "inspiration" as well as in relation to the normal processes of thinking, are described at length.

Das Leben der Seele, in Monographien über seine Erscheinungen u. Gesetze. Von Prof. Dr. M. LAZARUS. Zweite, erweiterte u. vermehrte Auflage. Dritter Band. Berlin: Dümmler, 1882. Pp. 444.

The present volume, completing the re-issue (begun in 1876) of a work which made its mark in psychological literature from its first appearance in 1856-7, includes four monographs—"Tact," "Blending and Co-operation of the Arts," "Friendship," "On the Origin of Morals". Of these the third has not before been printed, and the last not before in this connexion. The whole work, in its revised and now greatly extended form, will receive in a future Number the more detailed notice which its importance deserves.

Die Seele des Kindes. Beobachtungen über die geistige Entwicklung des Menschen in den ersten Lebensjahren. Von W. PREYER, ord. Prof. der Physiologie an der Universität zu Jena, &c. Leipzig: Grieben, 1882. Pp. xii, 424.

This elaborate monograph on the earliest mental development of children will be critically reviewed later on. It is the fulfilment of part of a general design of the author's to make a full physiological investigation of child-life both before and after birth. Besides collecting all available materials from other sources, he has conducted in the case of his own infant son, from birth almost daily for three years, a more systematic observation than any one has previously attempted with a child. The exposition is in three parts, following out with minute detail the development of (1) the senses, (2) the will, (3) the intellect. Among the appendices is one which records (with critical remarks) all the best-known cases of couching congenitally blind subjects, beginning with Cheselden's.

Grundzüge der Ethik u. Rechtsphilosophie. Von Dr. WILHELM SCHUPPE, ord. Prof. der Philosophie an der Universität Greifswald. Breslau: Koebner, 1881. Pp. x, 400.

"In this exposition Ethics and Philosophy of Law form one whole. Ethics needs Philosophy of Law as its complement, being liable to be utterly misunderstood unless its principle is so carried out to the final consequences. Philosophy of Law, on the other hand, needs Ethics for its foundation, without which its conceptions are all in the air, and its requirements indemonstrable."

Vorlesungen über Ästhetik. Von KARL CHRISTIAN FRIEDRICH KRAUSE, aus dem handschriftlichen Nachlasse des Verfassers herausgegeben von Dr. Paul Hohlfeld und Dr. Aug. Wünsche. Leipzig: Schulze, 1882. Pp. xvi., 392.

This is a fuller exposition of Krause's system of *Æsthetic*. Up to the present our knowledge of this system has been obtained from the *Grundriss der Ästhetik* which was published by J. Leutbecher after Krause's death. This work consists of the condensed statements or 'Dictate' which Krause prepared for his lectures on the subject. The present volume contains the complete lectures which he carefully wrote out evidently with the view of publication. In addition to this new material the editors inform us that he left two stout fasciculi of preliminary studies for his lectures. What these contain over and above the substance of the lectures themselves is to be published later on. Krause is in many ways a remarkable figure in the history of modern German thought, and we need not wonder at the persevering efforts which, as the editors tell us, have been made by some of his admirers to acquaint the public more fully with his speculations. His writings show that he combined a taste for abstract mathematical formulas with an enthusiastic feeling for philosophy, and more particularly ethical and æsthetical subjects. He was born in 1781. He studied in widely different fields at Jena, and seems to have lectured there on Philosophy. We afterwards hear of him at Berlin and Dresden engaged in various kinds of activity. His residence in Dresden helped to develop that romantic passion for art which was something very like a religion in his life and which inspired the chief part of his philosophical work. In 1823 he settled in Göttingen where he began to lecture on the philosophy of art as a Privatdocent. He did not rise to the grade of professor, owing, as the editors of the present volume tell us, to the palpable unfairness of the authorities. Heine probably had Krause in his eye when he wrote in the *Reisebilder*: "In Göttingen ideas are secretly smuggled in by Privatdocents". The present volume gives us a fairly complete survey of the field of æsthetic. The most original part of Krause's system is his conception of Beauty. His whole system of thought is pervaded by the idea of organic unity. He is ever striving after the totality of things. The last and absolute unity, God, comprehends all special organic unities, more particularly the identical spheres of the true, the good, and the beautiful. Each of these as fundamental essences (*Grundwesenheiten*) is at once unity, self-sufficiency (*Selbstständigkeit*) and totality. Each of these determinations is worked out in the elucidation of the idea of beauty. His way of dealing with these metaphysical conceptions is peculiar, though it is easy to recognise the influence of Schelling on his mode of envisaging the subject. He has a dangerous facility in inventing new terms, many of which are obviously tautological (*e.g.*, *Vereinbund*, *Ganzbund*), and a certain haziness is thrown over the exposition by the employment of so peculiar a terminology. In spite of these drawbacks, however, the volume is very interesting reading. Krause had a clear insight into the various aspects of beauty in nature

and art, and he manages with considerable ingenuity to work out his fundamental metaphysical conception into the region of concrete detail. If we add to this that he has a poetic enthusiasm for his subject which often lends a certain charm to his language, and that he saw more deeply than any of his predecessors, Schiller not excepted, into the significance of the æsthetic faculty and of art in the individual life and in the history of culture, we have probably said enough to recommend these lectures to the few who care for the subject.

[J. S.]

Die Gewöhnung und ihre Wichtigkeit für die Erziehung. Eine psychologisch-pädagogische Untersuchung von Dr. PAUL RADESTOCK. Berlin: Oehmigke, 1882. Pp. xiv., 107.

In this Essay the author, who is already favourably known through his volume *Schlaf u. Traum* (reviewed in MIND XVI), seeks to give scientific precision to the idea of habit and the process of its formation. This is exactly the kind of work which the teacher requires to have done for him, and Dr. Radestock has the teacher in view, and gives a thoroughly practical turn to his discussion. The formation of habits, so well expressed by the German 'Gewöhnung,' is seen to be the chief business of education. Its nature is elucidated by help of the newest ideas in physiological psychology. Habit depends on three principles: (*a*) the after effects of psychical functions, or the survival of a 'functional disposition' after the cessation of the action; (*b*) the principle of repeated exercise, namely that the nerve-structure becomes determined to a definite mode of function the more frequently the exercise of this particular function is carried out; and (*c*) the principle of association, or the connexion of functions performed simultaneously or in close succession. Habit is defined as the disposition or aptitude (*Anlage*) of a physico-psychical organism by which it is enabled, on given occasions (*auf gegebene Veranlassungen*), immediately to perform relatively equal functions. And the process of forming habits, or of habituating, is defined as the cultivation (*Ausbildung*) of this aptitude through the repetition of relatively equal impressions and of the reactions which follow the same. The author then proceeds to illustrate the most important effects of the principle, namely the economising of force; the increase of energy in the bodily organs, and in the several psychical functions; and the influence of custom on the collective life of individuals and nations. Dr. Radestock afterwards goes on to consider a number of habits of special importance for Education, such as cleanliness, order, and punctuality in childhood, and industry in the later school period of life. Some good remarks follow on the opposite side of the process of habituation, namely the weaning of the mind from habits which are bad or no longer necessary (*Entwöhnung*), and on excessive habituation or spoiling through custom and use (*Verwöhnung*). It is clearly shown that the principle of habit has its limits in education, and that in each of the three departments of mind it may if unrestrained lead to a narrow rigidity which

is unfavourable to further growth. But the author might perhaps with advantage have tried to introduce scientific precision here, also, by defining more exactly the relation of the principle of habit to that of expansion and growth. Nearly two thirds of the volume consist of notes, in which there are valuable references to various psychological and pædagogic works.

[J. S.]

Istoria Angliiskoy Etikoy. Tom I. "Angliiskii Moralisti XVII. Veka." A. SMIRNOVA. (*History of English Ethics.* Vol. I. "The English Moralists of the 17th Century." By A. SMIRNOFF.) Kasan, 1880.

We may deplore, or take pride in, the fact that we have left the composition of a history of English Philosophy almost entirely to strangers, and that it is chiefly owing to the labours of a Fischer, a Rémusat, or a Guyau that such works exist in a critical and scientific form. The book now before us is another tribute from abroad in acknowledgment of our services in the field of philosophy. Professor Smirnof, of Kasan University, has endeavoured, as he informs us, to supply a want. He says, that an impartial history of English moral philosophy has not been written, owing chiefly to Kant's condemnation of utilitarianism and the antagonistic attitude of the German schools, which have given rise to prejudices and misconceptions.

The author defines the science of ethics as the science of conduct and practical morality, and as such totally separate from metaphysics and religious speculations. He assigns to ethics the task of discriminating between right and wrong, taking it as an axiom that mankind as a body are desirous of acting morally and behaving wisely. Based on these broad principles, he prophesies a long future for this science, which will progress in the same ratio as the other great practical sciences.

Speaking of the state of moral philosophy up to the commencement of the 17th century, the author says:—

"It was deficient in learning, and did not satisfy the intellectual, moral, and socio-political wants of the time. The insufficiency of the scholastic system of ethics, at the period of the Renaissance, was reflected on the one hand by a revival of classical philosophies, and on the other by the protest of the Reformation. The influence of these two phenomena on the history of European culture was immense. It may be summed up in general terms as follows. The effect produced by the revival of classicism was felt chiefly in an intellectual sphere, and resulted in liberty of conscience, the right of individual judgment in matters of faith, and an intensification of the responsibility of the individual before God."

The author deplores the extreme realism of Bacon and his neutral attitude towards religion, but he admits that the circumstances of the period were such as to make it extremely difficult for any single man to overcome the tendency of the age. He believes that Bacon's extreme utilitarianism has done more for the development of moral philosophy than Descartes's advanced speculations, and he adds:—

"An impartial study of the history of the moral sciences, independently of any preconceived views, will bring us to the conclusion, that their

progress has been accomplished mainly in accordance with Bacon's system, namely by those methods of experimental investigation to which natural science owes its discoveries."

Hobbes's school he deprecates as being of a retrograde and reactionary character. Considerable space has been also devoted to a study of Cumberland, whom some have been inclined to regard as the founder of the modern school of scientific ethics; this, however, the author considers an exaggeration.

Professor Smirnof may be congratulated on having so carefully and successfully studied his subject. We look forward with interest towards the succeeding volumes, which will bring his history down to the present time.

E. A. BRAYLEY HODGETTS.

The Science of Ethics: By LESLIE STEPHEN. London: Smith, Elder. 1882. About 500 pp.

"The author of this *forthcoming* book was formerly an orthodox utilitarian of the school of Bentham and J. S. Mill. He has come to think, like other people, that modern theories of evolution necessitate a considerable modification of the doctrine expounded by those thinkers. He has accordingly tried to work out a statement of the fundamental ethical principles as they appear to an evolutionist. He holds further, and has tried to show in practice that the science of ethics may and should be treated without reference to certain metaphysical inquiries with which it has been frequently associated. The book covers in part the ground already occupied by Mr. Herbert Spencer's *Data of Ethics*; but it is the result of an independent investigation and treats the problem from a different point of view."

The Philosophical System of Antonio Rosmini-Serbati. With a Sketch of the Author's Life, Bibliography, Introduction and Notes. By THOMAS DAVIDSON. London: Kegan Paul, 1882. Pp. lxxx, 396.

"The purpose of this *forthcoming* work is to introduce to English readers the works of the founder of modern Italian philosophy, in so far as this has any distinctive characteristics. The works, as well as the movement initiated by them—a movement which made possible such men as Manzoni, Gustavo Cavour, Tommaséo, Gioberti, Mamiani, Bonghi, Stoppani, Calza, Ferri, &c.—are almost unknown outside of Italy. Nevertheless, this movement seems to deserve attention, as marking an epoch in the history of thought. Rosmini, by bringing ancient and modern philosophy to bear upon each other, was able to correct the primary assumptions of both, and thus to find a way out of dogmatism and scepticism, materialism and idealism. His chief merits lie in the direction of Ideology, a branch of science which, though presupposed in Logic, may be said to have been discovered by him. In accounting for the origin of concepts and ideas, as distinct from sensations, he showed the errors of Kantianism and the absurdities of Hegelianism, as well as the shortcomings of other great systems. To the *Sistema Filosofico*, which forms the basis of the present work, the expositor has added an introduction, notes and parallel passages from Rosmini's larger works, thus supplementing the general outline by the details of the more important parts. Though Rosmini's philosophy was intended as a scaffolding for a theory of revealed religion, it is none

the less true on that account, inasmuch as it does not set out with any theological assumptions, but bases itself on simple observation, which is shown to be a valid source of knowledge. In like manner, though owing very much to Scholasticism, it is in no way influenced by authority. It may be said to be a summing up of what philosophy has done thus far, and a basis for future progress."

Animal Intelligence. By GEORGE J. ROMANES, M.A., F.R.S., &c. ("International Scientific Series.") London: Kegan Paul, 1882.

"The author of this *forthcoming* work has been engaged for several years past in a systematic inquiry concerning Mental Evolution, or the probable history and the causes of the development of Mind as elucidated by the theory of descent. To obtain a trustworthy basis of fact for his generalisations, he has begun by inquiring into the phenomena of mind as at present observably existing in the animal kingdom, and to this subject the present work is exclusively devoted. It passes in review the whole animal kingdom, with the purpose of determining the upper limits of intelligence distinctive of each group, and the facts on which such determination rests have been carefully sifted from large masses of material collected from every available quarter."

VIII.—MISCELLANEOUS.

M. Th. Ribot has published a second edition, entirely re-cast, of his *L'Hérédité* under the new title of *L'Hérédité psychologique* (Germer Baillière, pp. 417). A notice of what is practically a new work is in type, but is unavoidably crowded out of the present Number.

Attention has been widely drawn to the many references to J. S. Mill in the lately published *Journals and Letters of Caroline Fox* (Smith, Elder, 1882). The first edition gave at full length the remarkable letter written by Mill to Miss Fox's brother, shortly after he had returned from Falmouth where his favourite brother Henry had just died, in April, 1840. This is the letter that had been mentioned by Prof. Bain in *MIND* XV., 394, in the following terms:—"A letter of warm acknowledgment to Mr. Barclay Fox, of Falmouth, for the attention bestowed on Henry by his family, is for Mill unusually effusive and teems with characteristic traits. One not a Christian addressing a Christian family upon death and wakening up the chords of our common humanity is a spectacle worth observing." The letter is otherwise remarkable for the way that Mill unbosoms to his correspondent upon the results of his whole literary activity as reviewer and editor, before he broke upon the world as author of the *Logic*. He continues to figure prominently in Miss Fox's journals for some years after, and there is repeated mention of letters received by her brother from him till the *Logic* appeared in 1843. The letters themselves, to the number of fourteen, have been found since the first edition of the *Journals*, &c. was published, and they are now added as an appendix to a second edition. In all of them (as otherwise in Miss Fox's notes) Mill appears with the genial and sympathetic character which his friends knew, if the world did not guess. His occupation with the *Logic* is the most frequently recurring topic, but

there are also other points of philosophic interest: *e.g.*, his estimate of Thomas Brown (p. 314), and (p. 331) a curiously pronounced assertion of Dualism (after Plato). He speaks of the chapter on Liberty and Necessity in the sixth book of the *Logic* as being in his own judgment "the best chapter in the two volumes" (p. 340).

Miss Elizabeth Hamilton, the only daughter of Sir William Hamilton, died on the 2nd of March. The readers of *MIND* have had proof of the philosophical ability she inherited, in the Note on "Mr. Lewes's Doctrine of Sensibility," which appeared in No. XIV., pp. 256-61. She was also the author of the article on her father in the new edition of the *Encyclopædia Britannica*. Lately she has devoted herself, with only too much ardour, to the task of translating Lotze's *Mikrokosmos*. We believe she had made considerable way with the translation, and it is to be hoped that some competent hand may be found ready to complete the work. Whatever be the value of Lotze's later *System der Philosophie*, the translation of which is promised from Oxford, it is by the *Mikrokosmos* that his name is most likely to live.

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. XV. No. 3. J. W. Mears—The Kant Centennial. W. T. Harris—Kant and Hegel in the History of Philosophy. G. S. Morris—Kant's Transcendental Deduction of Categories. J. W. Howe—The Results of the Kantian Philosophy. Notes and Discussions. Book Notices (J. Sully, *Illusions*, &c.).

REVUE PHILOSOPHIQUE.—VII^{me} Année, No. 1. Ch. Lévêque—L'esthétique musicale en France: i. Psychologie de la musique sociale. Ch. Secrétan—Le principe de la morale (i.). D. Nolen—Le monisme en Allemagne (i.). Analyses et Comptes-rendus. Notices bibliographiques (T. Fowler, Bacon, G. S. Bower, *Hartley and James Mill*, &c.). Rev. des Périod. Correspondance (L. Büchner, Schmitz-Dumont, P. Tannery). No. 2. P. Janet—Le Spinozisme en France. B. Perez—Les facultés de l'enfant à l'époque de la naissance. D. Nolen—Le monisme en Allemagne (fin). Variétés (C. S.—Les sept énigmes du monde, d'après du Bois-Reymond). Analyses et Comptes-rendus (A. C. Fraser, *Berkeley*, &c.). Rev. des Périod. No. 3. M. Vernes—Les étapes de l'idée religieuse dans l'humanité, d'après un nouveau livre de Hartmann. Ch. Lévêque—L'esthétique &c.: ii. Psychologie des instruments. Ch. Secrétan—Du principe de la morale (ii.). Analyses et Comptes-rendus (F. Pollock, *Spinoza*, &c.). Rev. des Périod.

LA CRITIQUE PHILOSOPHIQUE.—X^{me} Année. Nos. 44-52. C. Renouvier—Politique et socialisme: xiii. La question du progrès; L'évolution sentimentale de Saint-Simon (45); Notes en réponse à M. Sh. Hodgson (46, 48, 49, 50)—Mr. Hodgson's article on M. Renouvier's Psychology in *MIND* XXII. being reproduced by sections in the Nos.). W. James—Action réflexe et théisme (51, 52).

LA FILOSOFIA DELLE SCUOLE ITALIANE.—Vol. XXIV. Disp. 3. B. Labanca—Il problema della filosofia cristiana (i.). G. Fontana—Le basi della morale di H. Spencer. L. Ferri—Petrarca e il suo influsso sul pensiero del rinascimento. Bibliografia, &c. Vol. XXV. Disp. 1. B. Labanca—Il problema &c. (ii.). T. Mamiani—Del massimo problema in psicologia. A. Martinazzoli—Dell' insegnamento della filosofia nei licei. J. C. Doni—T. Mamiani e la questione dei proletarij. A. Chiappelli—Il dubbio di Socrate sulla immortalità. Bibliografia.

RIVISTA DELLA FILOSOFIA SCIENTIFICA.—An. I. No. 3. G. Trezza—L'Apocalisse Messianica. T. Vignoli—Del concetto di "legge" nella natura. A. Herzen—Il mondo organico secondo il concetto monistico. G. Canestrini—L'indirizzo della odierna biologia. G. Seppilli—Le basi fisiche delle funzioni mentali: i. La struttura della corteccia del cervello. Rivista Sintetica (E. Morselli, L'avvenire della potenza umana della natura). &c. No. 4. H. Spencer—Le aziende governative locali. P. Siciliani—Dottrine e metodi intorno alla storia della scienze e della filosofia. G. Buccola—La riproduzione delle percezioni di movimento nello spazio visivo, ricerche di psicologia sperimentale. L. Maggi—Le idee dell' Haeckel intorno alla morfologia dell' anima. Rivist. Sint. (E. Morselli—Un carattere atavico dell' evoluzione umana). &c.

ZEITSCHRIFT FÜR PHILOSOPHIE, &c.—Bd. LXXX. Heft 1. Th. Weber—Zur Kritik der Kantischen Erkenntnisstheorie (ii.). H. Hoeppe—Untersuchung der Frage ob Plato einen zeitlichen Anfang der Welt angenommen hat. J. Rau—Ueber das Prinzip des Schönen in der Betrachtung der Natur. Rabus—Logische Differenzen. H. Ulrici—Erläuternde u. berichtigende Bemerkungen zu dem vorstehenden Aufsätze Recensionen. Notizen. Bibliographie.

PHILOSOPHISCHE MONATSHEFTE.—Bd. XVIII. Hefte 1, 2. H. von Struve—Zur Psychologie der Sittlichkeit. Recensionen (H. Spencer, *The Data of Ethics*, &c.). Bibliographie. &c. Heft 3. J. Kreyenbühl—Die ethische Freiheit bei Kant. Recensionen u. Anzeigen. Literaturbericht, &c.

ZEITSCHRIFT FÜR VÖLKERPSYCHOLOGIE U. SPRACHWISSENSCHAFT.—Bd. XIII. Heft 4. G. Glogau—Empirismus u. Wissenschaftslehre. Beurtheilungen. F. Misteli—Berichtigungen Zum Aufsätze: Ueber Analogiebildungen insbesondere im Ugrischen.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE.—Bd. VI. Heft 1. Ths. Achelis—Lotze's Philosophie. B. Erdmann—Logische Studien (i.). Schmitz-Dumont—Die Kategorien der Begriffe u. das Congruenzaxiom (ii.). G. Heymans—Die Methode der Ethik (i.). A. Wernicke—Ueber Activität u. Passivität in ihrem Verhältniss zu Freiheit u. Nothwendigkeit. Anzeigen. Selbstanzeigen. &c.

PHILOSOPHISCHE STUDIEN (Herausgegeben von Wilhelm Wundt).—Bd. I. Heft 2. O. Staude—Der Begriff der Apperception in der neuern Psychologie. M. Trautscholdt—Experimentelle Untersuchungen über die Association der Vorstellungen. W. Wundt—Ueber die Messung psychischer Vorgänge. E. Koenig—Ueber den Substanzbegriff bei Locke u. Hume.

Other Books, &c., received:—*The Relation of Brain to Mind*, Glasgow (Maclehose), pp. 39. J. J. Murphy, *On the Addition and Multiplication of Logical Relatives* (Rep. from *Memoirs of Manch. Lit. and Phil. Soc.*, 1880-1), pp. 20. C. S. Pierce, *On the Logic of Number* (Rep. from *American Journal of Mathematics*, IV.), pp. 11. E. P. Scrimgeour, *The Doctrine of the Cross*, London (Bell), pp. 183. Anonymous, *The Perfect Way, or, The Finding of Christ*, London (Field & Tuer), pp. 341. G. M. Beard, *Trance and Muscle Reading*, New York, pp. 40. Marquis de Seoane, *Philosophie Elliptique du Latent Opérant*, Francfort s. M. (Rommel), I. (1879), pp. 157, II. (1881), pp. 170. T. Mamiani, *Delle Questioni Sociali e particolarmente dei Proletarij e del Capitale*, Roma (Bocca), pp. 405. P. Strauch, *Margaretha Ebner u. Heinrich v. Nördlingen: Ein Beitrag zur Geschichte der deutschen Mystik*, Freiburg i. B. u. Tübingen (Mohr), pp. 414. Ch. Bäumler, *Der sogenannte animalische Magnetismus oder Hypnotismus*, Leipzig (Vogel), pp. 74. W. Wundt, *Die Aufgaben der experimentellen Psychologie* (Rep. from *Unsere Zeit*, 1882, iii.), pp. 20. C. Heymou, *E. von Hartmann, Erinnerungen aus den Jahren 1868-81*, Berlin (Duncker), pp. 64. P. H. Ritter, *De Monadenleer van Leibniz*, Leiden (Van Doesburgh), pp. 163.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.



I.—CAN THERE BE A NATURAL SCIENCE OF MAN?

III.

WE have dwelt at length on the implication in ordinary perception of a spiritual action irreducible to phenomena, because the question whether and how far man is a part of nature, is apt to be debated exclusively on what is considered higher ground and, in consequence, without an admitted issue being raised. The transcendence of man is maintained on the ground of his exercising powers, which it may plausibly be disputed whether he exercises at all. The notion that thought can originate, or that we can freely will, is at once set down as a transcendental illusion. There is more hope of result if the controversy is begun lower down, with the analysis of an act which it is not doubted that we perform. Now, if the foregoing analysis be correct, the ordinary perception of sensible things or matters of fact involves the determination of a sensible process, which is in time, by an agency that is not in time—in Kant's language, a combination of "empirical and intelligible characters,"—as essentially as do any of those "higher" mental operations, of which the performance may be disputed. The sensation, of which the presentation as a fact is the nucleus of every perception, is an event in time. Its conditions again have all of them a history in time. It is true, indeed, that the relation between it and its cause, if its cause is understood

strictly as the sum of its conditions, is not one of time. The assemblage of conditions, "external" and "internal," constitutes the sensation. There is no *sequence* in time of the sensation upon the assembled conditions. But the assemblage itself is an event that has had a determinate history; and each of the constituent conditions has come to be what it is through a process in time. So much for the sensation proper. The presentation of the sensation, again, as of a fact related to other experience, is in like manner an event. A moment ago I had not so presented it: after a brief interval the perception will have given place to another. Yet the content of the presentation, the perception of this or that object, depends on the presence of that which in occurrence is past, as a fact united in one consciousness with the fact of the sensation now occurring; or rather, if the perception is one of what we call a developed mind, on numberless connected acts of such uniting consciousness, to which limits can no more be set than they can to the range of experience, and which yield the conception of a world revealed in the sensation. The agent of this neutralisation of time can as little, it would seem, be itself subject to conditions in time as the constituents of the resulting whole, the facts united in consciousness into the nature of the perceived object, are before or after each other.

We are not, however, fully stating the seemingly paradoxical character of everyday perception, in merely saying that it is a determination of events in time by a principle that is not in time. That is a description equally applicable to fact and to the perception of fact. For fact always implies relation determined by other relations in a universe of facts: and such relations, again, though they be relations of events to each other in time, imply, as has been previously pointed out, something out of time, for which all the terms of the several relations are equally present, as the principle of the synthesis which unites them in a single universe. But, in thus explaining the ultimate conditions of the possibility of fact, we need not assign the events themselves, and the determination of them by that which is not an event—the process of becoming, and the regulation of it as an orderly process,—to one and the same subject; as if the events happened to and altered the subject that unites them, or as if the source of order in becoming itself became. We cannot indeed suppose any real separation between the determinant and the determined. The order of becoming is only an order of becoming through the action of that which is not in becoming; nor can we think of this order as preceded by anything that was not an order of becoming. We contradict ourselves, if we say that there was first a chaos and then came

to be an order; for the "first" and "then" imply already an order of time, which is only possible through an action not in time. As little, on the other hand, can we suppose that which we only know as a principle of unity in relation, to exist apart from a manifold which through it is related. But we may avoid considering this principle, or the subject of which the presence and action render possible the relations of the world of becoming, as itself in becoming, or as the result of a process of becoming. It seems to be otherwise with our perceiving consciousness. The very consciousness, which holds together successive events as equally present, has itself apparently a history in time. It seems to vary from moment to moment. It apprehends processes of becoming in a manner which implies that past stages of the becoming are present to it as known facts; yet is it not itself coming to be what it has not been?

It will be found, we believe, that this apparent state of the case can only be explained by supposing that in the growth of our experience, in the process of our learning to know the world, an animal organism, which has its history in time, gradually becomes the vehicle of an eternally complete consciousness. What we call our mental history is not a history of this consciousness, which in itself can have no history, but a history of the process by which the animal organism becomes its vehicle. "Our consciousness" may mean either of two things; either a function of the animal organism, which is being made, gradually and with interruptions, a vehicle of the eternal consciousness; or that eternal consciousness itself, as making the animal organism its vehicle and subject to certain limitations in so doing, but retaining its essential characteristic as independent of time, as the determinant of becoming, which has not and does not itself become. The consciousness which varies from moment to moment, which is in succession, and of which each successive state depends on a series of "external and internal" events, is consciousness in the former sense. It consists in what may properly be called phenomena; in successive modifications of the animal organism, which would not, it is true, be what they are if they were not media for the realisation of an eternal consciousness, but which are not this consciousness. On the other hand, it is this latter consciousness, as so far realised in or communicated to us through modification of the animal organism, that constitutes our knowledge, with the relations, characteristic of knowledge, into which time does not enter, which are not in becoming but are once for all what they are. It is this again that enables us, by incorporation of any sensation to which attention is given into a system of known facts, to extend that system, and by means of fresh perceptions to arrive at further knowledge.

For convenience sake, we state this doctrine, to begin with, in a bald dogmatic way, though well aware how unwarrantable or unmeaning, until explained and justified, it is likely to appear. Does it not, the reader may ask, involve the impossible supposition that there is a double consciousness in man? No, we reply, not that there is a double consciousness, but that the one indivisible reality of our consciousness cannot be comprehended in a single conception. In seeking to understand its reality we have to look at it from two different points of view; and the different conceptions that we form of it, as looked at from these different points, do not admit of being united, any more than do our impressions of opposite sides of the same shield: and as we apply the same term "consciousness" to it, from whichever point of view we contemplate it, the ambiguity noticed necessarily attends that term. In any case of an end gradually realising itself through a certain organism a like difficulty arises. If we would state the truth about a living and growing body, we can only do it by the help of two conceptions, which we shall try in vain to reduce to a third. One will be the conception of the end, the particular form of life realised in the body—an end real and present, because operative, throughout the development of the body, but which we cannot identify with any stage of that development. The other will be that of the particular body, or complex of material conditions, organic to this end, as on the one hand dependent on an inexhaustible series of other material conditions, on the other progressively modified by results of the action—the life—to which it is organic. The particular living being is not less one and indivisible because we cannot dispense with either of these conceptions, if we would understand it aright, or because it is sometimes one, sometimes the other, of them that is predominant in our usage of the term "living being". In like manner, so far as we can understand at all the reality of consciousness, one and indivisible as it is in each of us, it must be by conceiving both the end, in the shape of a completed knowledge that gradually realises itself in the organic process of sentient life, and that organic process itself with its history and conditions. We have not two minds, but one mind; but we can know that one mind in its reality only by taking account, on the one hand, of the process in time by which effects of sentient experience are accumulated in the organism, yielding new modes of reaction upon stimulus and fresh associations of feeling with feeling; on the other, of the system of thought and knowledge which realises or reproduces itself in the individual through that process, a system into the inner constitution of which no relations of time enter.

If we examine the notion of intellectual progress common to

all educated men, we find that it virtually involves this twofold conception of the mind. We regard it as a progress towards the attainment of knowledge or true ideas. But we cannot suppose that those relations of facts or objects in consciousness, which constitute any piece of knowledge of which a man becomes master, first come into being when he attains that knowledge; that they pass through the process by which he laboriously learns, or gradually cease to be as he forgets or becomes confused. They must exist as part of an eternal universe—and that a spiritual universe or universe of consciousness—during all the changes of the individual's attitude towards them, whether he is asleep or awake, distracted or attentive, ignorant or informed. It is a commonplace indeed to assert that the order of the universe remains the same, however our impressions may change in regard to it; but, as the commonplace is apt to be understood, the universe is conceived in abstraction from consciousness, while consciousness is identified simply with the changing impressions, of which the unchanging order is independent. But the unchanging order is an order of relations; and, even if relations of any kind could be independent of consciousness, certainly those that form the content of knowledge are not so. As known they exist only for consciousness; and, if in themselves they were external to it, we shall try in vain to conceive any process by which they could find their way from without to within it. They are relations of facts, which require a consciousness alike to present them as facts and to unite them in relation. We must hold then that there is a consciousness for which the relations of fact, that form the object of our gradually attained knowledge, already and eternally exist; and that the growing knowledge of the individual is a progress towards this consciousness. It is a consciousness, further, which is itself operative in the progress towards its attainment, just as elsewhere the end realised through a certain process itself determines that process; as a particular kind of life, for instance, informs the processes organic to it. Every effort fails to trace a genesis of knowledge out of any thing which is not, in form and principle, knowledge itself. The most primitive germ from which knowledge can be developed is already a perception of fact, which implies the action upon successive sensations of a consciousness which holds them in relation, and which therefore cannot itself be before or after them, or exist as a succession at all. And every step forward in real intelligence, whether in the way of addition to what we call the stock of human knowledge, or of an appropriation by the individual of some part of that stock, is only explicable on the supposition that successive reports of the senses, successive efforts of attention, successive processes of

observation and experiment, are determined by the consciousness that all things form a related whole—a consciousness which is operative throughout their succession and which at the same time realises itself through them.

A familiar illustration may help to bring home that view of what is involved in the attainment of knowledge for which we are here contending. We often talk of reading the book of nature; and there is a real analogy between the process in which we apprehend the import of a sentence, and that by which we arrive at any piece of knowledge. In reading the sentence we see the words successively, we attend to them successively, we recall their meaning successively. But throughout that succession there must be present continuously the consciousness that the sentence has a meaning as a whole; otherwise the successive vision, attention and recollection would not end in a comprehension of what the meaning is. This consciousness operates in them, rendering them what they are as organic to the intelligent reading of the sentence. And when the reading is over, the consciousness that the sentence has a meaning has become a consciousness of what in particular the meaning is,—a consciousness, in which the successive results of the mental operations involved in the reading are held together, without succession, as a connected whole. The reader has then, so far as that sentence is concerned, made the mind of the writer his own. The thought which was the writer's when he composed the sentence, has so determined, has so used as *organs*, the successive operations of sense and soul on the part of the reader, as to reproduce itself in him through them; and the first stage in this reproduction, the condition under which alone the processes mentioned contribute to it, is the conviction on the reader's part that the sentence is a connected whole, that it has a meaning which may be understood. This conviction, it is true, is not wrought in him by the thought of the writer expressed in that particular sentence. He has learnt that sentences have a meaning before applying himself to that particular one. Before anyone can read at all, he must have been accustomed to have the thought of another reproduced in him through signs of one kind or another. But the first germ of this reproduction, the first possibility or receptivity of it, must have consisted in so much communication of some one else's meaning as is implied in the apprehension that he has a meaning to convey. It is through this elementary apprehension that certain functions of one man's soul—the soul of a listener or reader—become so organic to the thought of another, as that this thought gradually realises itself anew in the soul of the listener.

May we not take it to be in a similar way that the system of

related facts, which forms the objective world, reproduces itself, partially and gradually, in the soul of the individual who in part knows it? That this system implies a mind or consciousness for which it exists, as the condition of the union in relation of the related facts, is not an arbitrary guess. We have seen that it is the only answer which we have any ground for giving to the question, how such a union of the manifold is possible. On the other side, our knowledge of any part of the system implies a like union of the manifold in relation; such a presentation of feelings as facts, and such a determination of the facts by mutual relation, as is only possible through the action upon feelings of a subject distinguishing itself from them. This being so, it would seem that the attainment of the knowledge is only explicable as a reproduction of itself, in the human soul, by the consciousness for which the cosmos of related facts exists—a reproduction of itself, in which it uses the sentient life of the soul as its organ. Because the reproduction has thus a process in time for its organ, it is at once progressive and incapable of completion. It is "never ending, still beginning," because of the constant succession of phenomena in the sentient life, which the eternal consciousness, acting on that life, has perpetually to gather anew into the timeless unity of knowledge. There never can be that actual wholeness of the world for us, which there must be for the mind that renders the world one. But though the conditions under which the eternal consciousness reproduces itself in our knowledge, are thus incompatible with finality in that knowledge, there is that element of identity between the first stage of intelligent experience—between the simplest beginning of knowledge—and the eternal consciousness reproducing itself in it, which consists in the presentation of a many in one, in the apprehension of facts as related in a single system, in the conception of there being an order of things, whatever that order may turn out to be. Just as the conviction that a speaker or writer has a meaning is at once the first step in the communication of his thought to a listener or reader, and the condition determining all the organic processes of reading and listening which end in the reproduction of the thought, so the conception described is at once the primary form in which that mind to which the world is relative communicates itself to us, and the influence which renders the processes of sensuous experience into organs of its communication. It is only as governed by the forecast of there being a related whole that these processes can yield a growing, though for ever incomplete, knowledge of what in detail the whole is.

There should by this time be no need of the reminder, that the evidence of the action of this fore-casting idea, in the several

stages of our learning to know, does not depend on any account of it which the learner may be able to give. Whether he is able to give such an account or no, depends on the development of his powers of reflection, and the idea is at work before it is reflected on. The evidence of its action lies in results inexplicable without it. Nor must we imagine it, as the doctrine of innate ideas might lead us to do, antecedent in time to the processes of learning through which it realises itself, and which, in so doing, it makes what they are. This would be the same mistake as to suppose the life of a living body antecedent in time to the functions of the living body. It is inconsistent with the essential notion that the consciousness of a related whole, *so far as it is ours*, is an end realising itself in and determining the growth of intelligence. Thus when the question is raised, whether the conception of the uniformity of nature precedes or follows upon the inartificial and unmethodised exercise of induction, the answer must be either that it does both or that it does neither: or, better, that the question, being improperly put, does not admit of an answer. The conception of the uniformity of nature is one form of the consciousness on which we have been dwelling; and the processes of experience are related to it as respiration or the circulation of the blood is related to life. It is the end to which they are organic; but, at the same time, it is so operative in them that without it they would not be what they are. It is no more derivable from processes of sense, *as these would be without it*—from excitements and reactions of the nervous system—than life is derivable from mechanical and chemical functions of that which does not live. Under various expressions, it is the primary form of the intellectual life in which the eternal consciousness—the spirit for which the relations of the universe exist—reproduces itself in us. All particular knowledge of these relations is a filling up of this form, which the continued action of the eternal consciousness in and upon the sentient life renders possible.

Throughout this discussion of the conditions of knowledge our object, it will be remembered, has been to arrive at some conclusion in regard to the position in which man himself stands to the system of related phenomena called nature—in other words, in regard to the freedom of man; a conclusion on which the question of the possibility of Ethics, as other than a branch of physics, depends. Arguing, first, from the characteristics of his knowledge, postponing for the present the consideration of his moral achievement, our conclusion is that, while on the one hand his consciousness is throughout empirically conditioned,—in the sense that it would not be what at any time it is but for

a series of events, sensible or related to sensibility, some of them events in the past history of consciousness, others events affecting the animal system organic to consciousness,—on the other hand his consciousness would not be what it is, *as knowing*, or as a subject of intelligent experience, but for the self-realisation or reproduction in it, through processes thus empirically conditioned, of an eternal consciousness, not existing in time but the condition of there being an order in time, not an object of experience but the condition of there being an intelligent experience, and in this sense not “empirical” but “intelligible”. In virtue of his character as knowing, therefore, we are entitled to say that man is, according to a certain well-defined meaning of the term, a “free cause”. Let us reconsider shortly what that meaning is.

By the relation of effect to cause, unless the “cause” is qualified by some such distinguishing adjective as that just employed, we understand the relation of a given event, either to another event invariably antecedent to it, and upon which it is invariably sequent, or to an assemblage of conditions which together constitute the event—into which it may be analysed. Such a cause is not a “free” cause. The uniformly antecedent event is in turn dependent on other events; any particular sum of conditions is determined by a larger complex, which we at least cannot exhaust. But the condition of the possibility of this relation in either of its forms—the condition of events being connected in one order of becoming, the condition of facts being united in a single system of mutual determination—is the action of a single principle, to which all events and facts are equally present and relative, but which distinguishes itself from them all and can thus unite them in their severalty. In speaking of this principle we can only use the terms we have got; and these, being all strictly appropriate to the relations, or objects determined by the relations, which this principle renders possible but under which it does not itself subsist, are strictly inappropriate to it. Such is the term “cause”. So far indeed as it indicates the action of something which makes something else what it is, it might seem applicable to the unifying principle which makes the world what it is. But we have no sooner so applied it than we have to qualify our statement by the reminder, that to the unifying principle the world, which it renders one, cannot be something else than itself *in the same way* as, to ordinary apprehension, a determined fact is something else than the conditions determining it, or an event caused something else than the antecedent events causing it. That the unifying principle should distinguish itself from the manifold which it unifies, is indeed the condition of the unification; but it must not be supposed that the manifold has

a nature of its own apart from the unifying principle, or this principle another nature of its own apart from what it does in relation to the manifold world. Apart from the unifying principle the manifold world would be nothing at all, and in its self-distinction from that world the unifying principle takes its character from it; or, rather, it is in distinguishing itself from the world that it gives itself its character, which therefore but for the world it would not have.

It is true indeed of anything related as a cause to anything else on which it produces effects, that its efficiency in the production of those effects is an essential part of its nature, just as susceptibility to those effects is an essential part of the nature of that in which they take place. No group of conditions would be what they are but for the effect which it lies in them to produce; no events what they are but for the other events that arise out of them: any more than, conversely, the conditioned phenomenon, or necessarily sequent event, has a nature independent of its conditions or antecedents. Still every particular cause, whether agent or assemblage of conditions or antecedent event, has a nature, made for it by other agents, conditions or antecedent events, which appears but partially in any particular effect; and again the patient or conditioned phenomenon or sequent event, in which that effect appears, has a nature other than that which it derives from the particular cause. Therefore in the determined world there is a sense in saying that a cause is something on which something *else* depends for being what it is, which no longer holds when the effect is the whole determined world itself, and the cause the unifying principle implied in its determinateness. There is nothing to qualify the determined world *as a whole* but that inner determination of all contained in it by mutual relation, which is due to the action of the unifying principle; nor anything to qualify the unifying principle but this very action, with the self-distinction necessary to it. When we transfer the term "cause," then, from a relation between one thing and another within the determined world to the relation between that world and the agent implied in its existence, we must understand that there is no separate particularity in the agent, on the one side, and the determined world as a whole, on the other, such as characterises any agent and patient, any cause and effect, within the determined world. The agent must act absolutely from itself in the action through which that world is—not, as does, everything within the world, under determination by something else. The world has no character but that given it by this action: the agent no character but that which it gives itself in this action.

This is what we mean by calling the agent a "free cause".

But the question at once arises whether, when we have thus qualified the term "cause" by an epithet which effectually distinguishes it from any cause cognisable within the world of phenomena, it still has a meaning for us. The answer is that but for our own exercise of such causality it would have none. But, in fact, our action in knowledge—the action by which we connect successive phenomena in the unity of a related whole—is an action as absolutely from itself, as little to be accounted for by the phenomena which through it become an intelligent experience, or by anything alien to itself, as is that which we have found to be implied in the existence of the universal order. This action of our own "mind" in knowledge—to say nothing of any other achievement of the human spirit—becomes to us, when reflected on, a *causa cognoscendi* in relation to the action of a self-originating "mind" in the universe; which we then learn to regard as the *causa essendi* to the same action, exercised, under whatever limiting conditions, by ourselves. We find that, quite apart from the sense in which all facts and events, including those of our natural life, are determined by that mind without which nature would not be, there is another sense in which we ourselves are not so much determined by it as identified by it with itself, or made the subjects of its self-communication. All things in nature are determined by it, in the sense that they are determined by each other in a manner that would be impossible but for its equal, self-distinguishing presence to them all. It is thus that the events of our natural life are determined by it; not merely the mechanical and chemical processes presupposed by that life, but the life itself, including all that can properly be called the successive phenomena of our mental history. But to say that it is thus determined, though it is true of our natural life, is not the full account of it: for this life, with its constituent events or phenomena, is organic to a form of consciousness of which knowledge is the development, and which, if for no other reason than that it conceives time, cannot itself be in time. While the processes organic to this consciousness are determined by the mind to which all things are relative, in the sense that they are part of a universe which it renders possible, this consciousness itself is a reproduction of that mind, in respect, at least, of its attributes of self-origination and unification of the manifold.

It may be asked here, what after all is the conclusion as to the freedom of man himself to be drawn from these considerations in regard to knowledge. "Granted," it may be said, "that the knowledge of nature is irreducible to a natural process, that it implies the action of a principle not in time, which you may call, if you please, an eternal mind; still you admit that man's

attainment of knowledge is conditional on processes in time and on the fulfilment of strictly natural functions. These processes and functions are as essential to man, as much a part of his being, as his knowledge is. How then can it be said that the being itself, thus conditioned, is not a part of nature but is free? Or, if this statement is made and can be justified, must it not be left alongside of an exactly contrary statement? Do you not after all leave man still "In doubt to deem himself a God or beast"; still perplexed with the "partly this, partly that" conclusion, for which philosophy, if good for anything, should substitute one more satisfactory, but which, on the contrary, it seems merely to restate in a more prolix form?"

We answer that, if the foregoing considerations have any truth in them, we are not shut up in this ambiguity. To say that man in himself is *in part* an animal or product of nature, on the ground that the consciousness which distinguishes him is realised through natural processes, is not more true than to say that an animal is in part a machine, because the life which distinguishes it has mechanical structures for its organs. If that activity of knowledge on the part of man, to which functions provisionally called natural are organic, is as absolutely different from any process of change or becoming as we have endeavoured to show that it is, then even the functions organic to it are not described with full truth when they are said to be natural. For the constituent elements of an organism can only be truly and adequately conceived as rendered what they are by the end realised through the organism. The mechanical structure organic to life is not adequately conceived as a machine, though, for the purpose of more accurate examination of the structure in detail, it may be convenient to treat it as such. And, for a like reason, the state of the case in regard to a man is not fairly represented by saying that, though not merely an animal or natural, he is so in respect of the processes of physical change through which an intelligent consciousness is realised in him. In strict truth the man who knows, so far from being an animal altogether, is not an animal at all or even in part. The functions, which would be those of a natural or animal life if they were not organic to the end consisting in knowledge, just because they are so organic, are not in their full reality natural functions, though the purposes of detailed investigation of them—perhaps the purpose of improving man's estate—may be best served by so treating them. For one who could comprehend the whole state of the case, even a digestion that served to nourish a brain, which was in turn organic to knowledge, would be essentially different from digestion in an animal incapable of knowledge, even if it were not the case

that the digestive process is itself affected by the end to which it is mediately relative. And, if this is true of those processes which are directly or indirectly organic to knowledge but do not constitute or enter into it, much more is it true of the man capable of knowledge, that in himself he is not an animal, not a link in the chain of natural becoming, in part any more than at all.

The question whether a man himself, or in himself, is a natural or animal being, can only mean whether he is so in respect of that which renders him conscious of himself. There is no sense in asking what anything *in itself* is, if it has no self at all. That which is made what it is wholly by relations to other things, neither being anything but their joint result nor distinguishing itself from them, has no self to be inquired about. Such is the case with all things in inorganic nature. Of them at any rate the saying "*Natur hat weder Kern noch Schale*" is true without qualification. The distinction between inner and outer, between what they are in themselves and what they are in relation to other things, has no application to them. In an organism, on the other hand, the distinction between its relations and itself does appear. The life of a living body is not, like the motion of a moving body, simply the joint result of its relations to other things. It modifies those relations, and modifies them through a nature not reducible to them, not constituted by their combination. Their bearing on it is different from what it would be if it did not live; and there is so far a meaning in saying that the organism is something in itself other than what its relations make it—that, while it is related to other things according to mechanical and chemical laws, it has itself a nature which is not mechanical or chemical. There is a significance, accordingly, in the inquiry what this nature in itself is, which there is not in the same inquiry as applied to anything that does not live. But the living body does not, as such, present its nature to itself in consciousness. It does not consciously distinguish itself from its relations. Man, on the other hand, does so distinguish himself, and his doing so is his special distinction. The inquiry, therefore, what he in himself is, must refer not merely to a character which he has as more, and other, than a joint result of relations to other things—such a character he has as simply living,—but to the character which he has as consciously distinguishing himself from all that happens to him.

Now this distinction by man of himself from events is no less essentially different from any process in time or any natural becoming than is the activity of knowledge, which indeed depends upon it. It is through it that he is conscious of time, of becoming, of a personal history; and the active principle of this consciousness cannot itself be determined by these relations

in the way of time or becoming, which arise for consciousness through its action. The "punctum stans" to which an order of time must be relative that it may be an order of time, cannot itself be a moment or series of moments in that order; nor can the "punctum stans" in consciousness, necessary to the presentation of time, be itself a succession in consciousness. And that which is true in regard to the mere presentation of time is true also of everything presented in time—of all becoming, of every history. To be conscious of it we must unite its several stages as related to each other in the way of succession; and to do that we must ourselves be, and distinguish ourselves as being, out of the succession. "*Ἀνάγκη ἄρα ἀμυγῇ εἶναι τὸν νοῦν, ὥσπερ φήσιν Ἀναξαγόρας, ἵνα κρατῇ, τοῦτο δ' ἐστίν, ἵνα γνωρίξῃ*". It is only through our holding ourselves aloof, so to speak, from the manifold affections of sense, as constant throughout their variety, that they can be presented to us as a connected series, and thus move us to seek the conditions of the connexion between them. And again, when the conception of such conditions has been arrived at, it is only through the same detachment of self from the succession of its experiences that we can conceive the conditions as united in their changes by an unchanging law, which, as determining the order of all events in time, is itself unaffected by time.

Thus, while still confining our view to man's achievement in knowledge, we are entitled to say that in himself, *i.e.*, in respect of that principle through which he at once is a self and distinguishes himself as such, he exerts a free activity,—an activity which is not in time, not a link in the chain of natural becoming, which has no antecedents other than itself but is self-originated. There is no incompatibility between this doctrine and the admission that all the processes of brain and nerve and tissue, all the functions of life and sense, organic to this activity (though even they, as in the thinking man, cannot, for reasons given, properly be held to be merely natural), have a strictly natural history. There would only be such an incompatibility, if these processes and functions actually constituted or made up the self-distinguishing man, the man capable of knowledge. But this, as we have seen, is what they cannot do. Human action is only explicable by the action of an eternal consciousness, which uses them as its organs and reproduces itself through them. The question why there should be this reproduction, is indeed as unanswerable as every form of the question, why the world as a whole should be what it is. Why any detail of the world is what it is, we can explain by reference to other details which determine it; but why the whole should be what it is, why the mind which the world

implies should exhibit itself in a world at all, why it should make certain processes of that world organic to a reproduction of itself under limitations which the use of such organs involves—these are questions which, owing perhaps to those very limitations, we are equally unable to avoid asking and to answer. We have to content ourselves with saying that, strange as it may seem, it is so. Taking all the facts of the case together, we cannot express them otherwise. The unification of the manifold in the world implies the presence of the manifold to a mind, for which, and through the action of which, it is a related whole. The unification of the manifold of sense *in our consciousness* of a world implies a certain self-realisation of this mind in us through certain processes of the world which, as explained, only exists through it—in particular through the processes of life and feeling. The wonder in which philosophy is said to begin will not cease when this conclusion is arrived at; but, till it can be shown to have left some essential part of the reality of the case out of sight, and another conclusion can be substituted for it which remedies the defect, this is no reason for rejecting it.

Before proceeding, it may be well to point out that it is a conclusion which can in no wise be affected by any discovery, or (legitimately) by any speculation, in regard either to the relation between the human organism and other forms of animal structure, or to the development of human intelligence and the connexion of its lower stages with the higher stages of the intelligence of brutes. Having admitted that certain processes in time are organic in man to that consciousness exercised in knowledge, which we hold to be eternal, we have no interest in abridging those processes. If there are reasons for holding that man, in respect of his animal nature, is descended from “mere” animals—animals in whom the functions of life and sense were not organic to the eternal or distinctively human consciousness,—this does not affect our conclusion in regard to the consciousness of which, as he now is, man is the subject; a conclusion founded on analysis of what he now is and does. This conclusion could only be shaken by showing either that a consciousness of the kind which, for reasons already set forth, we describe as eternal, is not involved in knowledge, or that such a consciousness can in some intelligible way be developed out of those successions of feeling which can properly be treated as functions of the animal system; and this must mean that it has some element of identity with them. That countless generations should have passed during which a transmitted organism was progressively modified by reaction on its surroundings, by struggle for existence, or otherwise, till its functions became such that an eternal consciousness could realise or reproduce itself through them—

this might add to the wonder with which the consideration of what we do and are must always fill us, but it could not alter the results of that consideration. If such be discovered to be the case, the discovery cannot affect the analysis of knowledge—of what is implied in there being a world to be known and in our knowing it,—on which we found our theory of the action of a free or self-conditioned and eternal mind in man.

The question, however, of the development of the human organism out of lower forms is quite different from that of the relation between the intelligence exercised in our knowledge and the mere succession of "impressions and ideas," *i.e.*, of feelings in their primary, or more lively, and in their secondary, or less lively, stage. Till some flaw can be shown in the doctrine previously urged, we must hold that there is an absolute difference between change and the intelligent consciousness or knowledge of change, which precludes us from tracing any development of the one into the other, if development implies any identity of principle between the germ and the developed outcome. When we speak of a development of higher from lower forms of intelligence, there should be no mistake about what we mean, and what we do not mean. We mean the development of an intelligence which, in the lowest form from which the higher can properly be said to be developed, is already a consciousness of change, and therefore cannot be developed out of any succession of changes in the sensibility, contingent upon reactions of the "psychoplasm" or nervous system, however that system may have been modified by accumulated effects of its reactions in the past. To deny categorically on this account that the distinctive intelligence of man—his intelligence as knowing—can be developed from that of "lower animals" would indeed be more than we should be warranted in doing. We have much surer ground for saying what, in respect of our knowledge, we are than for saying what the animals are not. The analysis of what we do and have done in knowledge, which entitles us to certain conclusions as to what we must be in order to do it, is inapplicable to beings with whom we cannot communicate. If the animals have a consciousness corresponding to that which we exercise in knowledge, at any rate we cannot enter into it. Their actions, as observed from outside, would seem to be explicable without it—explicable as resulting from the determination of action by feeling and that of feeling by feeling, in other words as resulting from successive changes of the sensibility, without any need for ascribing to them any consciousness of change, any synthesis of the modifications they experience as belonging to an inter-related world. We are thus warranted in saying that we have no evidence of the presence in "brutes" of such an

intelligence as that which forms the basis of our knowledge ; and that, *if it is absent*, there can, properly speaking, have been no development of our mind from such a mind as theirs. But this hypothetical negation is quite compatible with the admission that there may have been a progressive development, through hereditary transmission, of the animal system which has become organic to the distinctive intelligence of man ; that the particular modes of successive feeling upon which a unifying intelligence supervenes in man, rendering them for him into a related world, may be the result of a past experience on the part of beings in whom such intelligence had not yet supervened, and who were in that sense not human ; and that certain modifications of the sensibility, arising from this pre-human history, may have been the condition, according to some unascertained law, of that supervention of intelligence in man.

So far we have been dealing with what we may venture to call the metaphysics of experience or knowledge, as distinct from the metaphysics of moral action. We have been considering the action of the self-conditioning and self-distinguishing mind, which the existence of a connected world implies, in determining a particular product of that world, *viz.*, the animal system of man, with the receptive feelings to which that system is organic,—in so determining it as to reproduce itself, under limitations, in the capacity for knowledge which man possesses. The characteristic of this particular mode of its reproduction in the human self is the apprehension of a world which *is*, as distinct from one which *should be*. It constitutes a knowledge of the conditions of the feelings that occur to us, and of uniform relations between changes in those conditions. But the animal system is not organic merely to feeling of the kind just spoken of as receptive—to *impressions*, according to the natural meaning of that term, conveyed by the nerves of the several senses. It is organic also to wants, and to impulses for the satisfaction of those wants, which may be in many cases occasioned by impressions of the kind mentioned, but which constitute quite a different function of the animal system. These wants, with the sequent impulses, must be distinguished from the consciousness of wanted objects, and from the effort to give reality to the objects thus present in consciousness as wanted, no less than sensations of sight and hearing have to be distinguished from the consciousness of objects to which those sensations are conceived to be related. It has been sufficiently pointed out how the presentation of sensible things, on occasion of sensation, implies the action of a principle which is not, like sensation, in time, or an event or a series of events, but must equally be present to, and distinguish itself from, the several

stages of a sensation to which attention is given, as well as the several sensations attended to, which are referred to a single object. In like manner the transition from mere want to consciousness of a wanted object, from the impulse to satisfy the want to an effort for realisation of the idea of the wanted object, implies the presence of the want to a subject which distinguishes itself from it and is constant throughout successive stages of the want. So much is implied in the conversion of a want into the presentation of a wanted object, though the want be of strictly animal origin, and however slightly the object may be defined in consciousness. Every step in the definition of the wanted object implies a further action of the same subject, in the way of comparing various wants that arise in the process of life, along with the incidents of their satisfaction, as they only can be compared by a subject which is other than the process—not itself a stage or series of stages in the succession which it observes. At the same time as the reflecting subject traverses the series of wants, which it distinguishes from itself while it presents their filling as its object, there arises the idea of a satisfaction on the whole—an idea never realisable, but for ever striving to realise itself in the attainment of a greater command over means to the satisfaction of particular wants.

For the present we take no notice of any wanted objects but such as arise from the presentation by a reflecting subject to itself of wants that are of a purely animal origin. With the exception of the object consisting in a general satisfaction of such wants, we take no account as yet of wants that are of distinctively human origin—of wants that arise out of conceptions. The form of consciousness which we are considering does indeed differ absolutely from the mere succession of animal wants; but it so differs, not in respect of the presence of such wants as are not of animal origin, but in virtue of that distinction of self from the wants, through which there supervenes upon the succession of wants a consciousness—not a succession—of wanted objects. It is this consciousness which yields, in the most elementary form, the conception of something that *should be* as distinct from that which *is*, of a world of practice as distinct from that world of experience of which the conception arises from the determination by the Ego of the receptive senses. Whereas in perceptive experience the sensible object carries its reality with it—in being presented at all, is presented as real, though the nature of its reality may remain to be discovered,—in practice the wanted object is one to which real existence has yet to be given. This latter point, it is true, is one which language is apt to disguise. The food which I am said to want, the treasure on which I have set my heart, are already in existence. But, strictly speaking,

the objects which in these cases I present to myself as wanted, are the eating of the food, the acquisition of the treasure; and so long as I want them, these exist for me only as ideas which I am striving to realise, as something which I would might be but which is not. Thus the world of practice depends on man in quite a different sense from that in which nature, or the world of experience, does so. We have seen indeed that independence is not to be ascribed to nature in the sense either that there would be nature at all without the action of a spiritual self-distinguishing subject, or that there could be a nature for us—for our apprehension—but for a further action of this subject in or as our soul. It is independent of us, however, in the sense that it does not depend on any exercise of our powers whether the sensible objects, of which we are conscious, shall become real or no. They are already real. On the other hand, it is characteristic of the world of practice that its constituents are objects of which the existence in consciousness, as wanted, is prior to, and conditions, their existence in reality. It depends on a certain exercise of our powers, determined by ideas of the objects as wanted, whether those ideas shall become real or no.

The same thing may be otherwise stated by saying that the world of practice—the world composed of moral or distinctively human actions, with their results—is one in which the determining causes are *motives*; a *motive* again, being an idea of an end, which a self-conscious subject presents to itself, and which it strives and tends to realise. Now *prima facie*, as will be admitted on all hands, this causality of motives effectually distinguishes the world which moral action has brought, and continues to bring, into being, from the series of natural events. In the latter the occurrence of an event does not depend on an idea of the event, as a desired object, being previously presented. If then moral action is to be brought within the series of natural phenomena, it must be on the supposition that the motives which determine it, having natural antecedents, are themselves but links in the chain of natural phenomena; and that thus moral action, though distinguished from other kinds of natural event by its dependence on prior ideas, is not de-naturalised, since the ideas on which it depends are themselves of natural origin.

The question whether this is so is the point really at issue in regard to the possibility and indispensableness of a Moral Philosophy which shall not be a branch of natural science; or, if we like to put it so, in regard to the freedom of moral agents. It is not the question commonly debated, with much ambiguity of terms, between “determinists” and “indeterminists”; not the question whether there is, or is not, a possibility of unmotivated

willing; but the question whether motives, of that kind by which it is the characteristic of moral or human action to be determined, are of properly natural origin or can be rightly regarded as natural phenomena.

If the foregoing analysis be correct, even those motives (defined above) which lie nearest, so to speak, to animal wants, are yet effectually distinguished from them and from any kind of natural phenomena. No one would pretend to find more than a strictly natural event either in any appetite or want incidental to the process of animal life, or in the effect of such a want in the way of an instinctive action directed to its satisfaction. But it is contended that such appetite or want does not constitute a motive proper; does not move to any distinctively human action, except as itself determined by a principle of other than natural origin. It only becomes a motive, so far as upon the want there supervenes the presentation of the want by a self-conscious subject to himself, and with it the idea of a self-satisfaction to be attained in the filling of the want.

It is not indeed that the want is intrinsically altered, or ceases to be a want, through the supervision upon it of the moral motive, properly so called; but that, while it continues or ceases and begins again, there arises a new agency, other than it, from its presence to a self-conscious subject which takes from it an idea of an object, in which self-satisfaction is to be sought. And the new agency, thus resulting, is no more a natural event or process, or the product of any such event or process, than is the self-consciousness to which it owes its distinguishing character. We may illustrate the state of the case from what takes place in physical life. A chemical process does not cease to be a chemical process because it goes on in a living organism, but it does become contributory to a result wholly different from any which, apart from a living organism, it could have yielded. On the other hand, life is not a chemical or mechanical process because chemical and mechanical processes are necessary to the living body, unless such processes can by themselves constitute life. No more is any moral action, or action from motives, a natural event because natural want is necessary to it, unless the self-consciousness, in and through which a motive arises out of the want, is itself a natural event or series of events or relation between events. That it is not so is scarcely less plain of self-consciousness, in that relation to want which yields a motive, than it is of it in that relation to sensation which yields perception and, through it, knowledge. Can that be an event or phenomenon, whether in the way of want or otherwise, which throughout the successive stages, the abatements and revivals, of a want presents the single idea of

the self-satisfaction to be attained in its filling; which unites successive wants in the idea of a general need for which provision is to be made, and holds together the successive wants and fillings as the connected but distinct incidents of an inner life, as an experience of happiness or the reverse? Can it, again, be a *series* of events—either the series of which the connexion in an inner life thus arises through its action, or any other series? Can it, finally, be the connexion or relation thus arising, or any other relation? But when we have rejected all these alternatives, when we have said that the practical self-consciousness, which is the distinguishing factor in all motives, is not an event or series of events or relation between events, we have said that it is not *natural* in the ordinary sense of that term; not natural at any rate in any sense in which naturalness would imply its determination by antecedent events, or by conditions of which it is not itself the source.

If the reader is satisfied by these considerations that there is something more than natural in the motive to a moral or distinctively human action, he may be apt to assume—since there is no disputing the dependence on animal impulse at any rate of those elementary motives to which we have so far confined our view—that animal impulse is one component of the motive, while self-consciousness is another; that the moral agent is partly an animal, partly a rational or self-realising subject. But against such a view we should protest as much as, previously, against the notion that the presence of a double consciousness in man was implied in the distinction pointed out between the process of sensation in time and its determination by a subject not in time, as alike necessary to perception and knowledge. If it would be untrue to say of the functions of life that they are partly chemical, because without chemical processes they could not be exercised, it is even more untrue to say of a motive, in the proper sense, that it is partly animal, because, unless an animal want occurred, it would not arise. The motive is not made up of a want and self-consciousness, any more than life of chemical processes and vital ones. It is one and indivisible; but, indivisible as it is, it results, as perception results, from the determination of an animal nature by a self-conscious subject other than it; so results, however, as that the animal condition does not survive *in* the result. The want, no doubt, may remain along with the new result—the motive, properly so called—which arises from its relation to self-consciousness, but it is not a part of it. Hunger, for instance, may survive along with the motive, involving some form of self-reference, which arises out of it in the self-conscious man—whether that motive be the desire to relieve himself from pain, or to give himself

pleasure, or to qualify himself for work, or to provide himself the means of living,—but hunger neither is that motive nor a part of it. If it were, the resulting act would not be moral but instinctive. There would be no moral agency in it. It would not be the man that did it, but the hunger or some “force of nature” in him. The motive in every imputable act for which the agent is conscious on reflection that he is answerable, is a desire for personal good in some form or other; and, however much the idea of what the personal good for the time is may be affected by the pressure of animal want, this want is no more a part or component of the desire than is the sensation of light or colour, which I receive in looking at this written line, a component part of my perception in reading it.

Whether our conclusion be accepted or no, it may be hoped that the point which it is sought to make good in regard to the distinctive character of motives has at least been made clear. What instinct is, whether there are in truth merely instinctive actions, is a question on which, though of late some men seem almost to have argued themselves into believing the contrary, there is much more room for doubt than there is as to the nature and reality of motives and the moral action determined by them. If we have to explain what we mean by instinct and instinctive action, we have to do it by excluding the essential characteristic of our own motives and motivated action. By an instinctive action we mean one *not* determined by a conception, on the part of the agent, of any good to be gained or evil to be avoided by the action. It is superfluous to add, good *to himself*; for anything conceived as good in such a way that the agent acts for the sake of it, must be conceived as *his own* good, though he may conceive it as his own good only on account of his interest in others, and in spite of any amount of suffering on his own part incidental to its attainment. By a moral action—an action morally imputable or that can be called good or bad—we mean one that *is* so determined as the instinctive action is not. Clearly it is nothing but our knowledge of what moral or motivated action is, that gives a meaning to the negation conveyed in the description of another sort of action as instinctive. Whether there in fact are actions, either done by ourselves under certain conditions or by other agents, that correspond to this negative description, can never be known with the same intimate certainty with which it is known that actions belonging to our conscious experience are related to motives in that manner of which the negative forms the meaning of the description of any action as instinctive.

It is true that it makes no difference to the outward form of an action whether it is so related to a motive or no; whether

it has a moral quality or—as would be the case, if it were determined *directly* by animal want—is merely instinctive, in the sense of not proceeding from a conception of personal good. It may have the same effect on the senses of an onlooker, the same nervous and muscular motions may be involved in it, the same physical results may follow from it, in the one case as in the other. But it is not by the outward form, thus understood, that we know what moral action is. We know it, so to speak, on the inner side. We know what it is in relation to us, the agents; what it is as our expression. Only thus indeed do we know it at all. In knowledge so derived, where from the nature of the case our judgments are incapable of verification in the ordinary sense by reference to matters of fact—for the motive which an act expresses is not what we commonly mean by a matter of fact—there is, no doubt, much liability to arbitrariness in the interpretation of the self-consciousness to which alone we can appeal. Against such arbitrariness, it would seem, we can only protect ourselves by great circumspection in the adoption of our formulæ, so that they may be as nearly adequate as possible to the inner experience which we mean them to convey, and by constant reference to the expression of that experience which is embodied, so to speak, in the habitual phraseology of men, in literature, and in the institutions of family and political life. However insufficient such safeguards may be, it remains the case that self-reflection is the only possible method of learning what is the inner man or mind that our action expresses; in other words, what that action really is. Judgments so arrived at must be the point of departure for all inquiry into processes by which our actual moral nature may have been reached, and into links of connexion between it and that of animals otherwise endowed. Whatever the result of such inquiries, it can only be through a confusion that we allow them to affect our conclusions in regard to the actuality of our conscious life. Our knowledge of what that life is may not seldom entitle us to reject speculations as to a process by which it has come about, on the ground that such a product as can be legitimately traced from the process is not the inner life which we know. But no inference from such supposed processes can entitle us to decide that this life is not that which a sufficiently comprehensive view of the evidence afforded by itself would authorise us in taking it to be: since the acceptance of this evidence as the given reality is the presupposition of any inquiry into a process by which the given reality has come to be.

It must be plainly admitted, then, that self-reflection is the basis of the view here given in regard to the distinctive character of the motives which moral actions represent. Any one

making this admission will of course endeavour to conduct his self-reflection as circumspectly as possible, and to save it as far as may be from errors which personal idiosyncrasy might occasion, by constant reference to the customary expressions of moral consciousness in use among men, and to the institutions in which men have embodied their ideas or ideals of permanent good. In the interpretation, however, of such expressions and institutions self-reflection must be our ultimate guide. Without it they would have nothing to tell: and it is to it, avowedly, that we make our appeal when we say that to every action morally imputable, or of which a man can recognise himself as the author, the motive is always some idea of the man's personal good—an idea absolutely different from animal want, even in cases where it is from anticipation of the satisfaction of some animal want that the idea of personal good is derived. Now a motive so constituted, like the perception which answers to it in the sphere of speculative intelligence, clearly admits of being considered in seemingly opposite ways. Two seemingly incompatible, yet equally true, sets of statements may be made in regard to it: which, however, are not really incompatible, because one relates to the motive in its full reality, which is not a sensible event, the other to a sensible event implied in it (as sensation is implied in perception) but which is not it. The sensible event or phenomenon, implied in the motive, like every other event, is determined by antecedent events according to natural laws. The motive itself, though it too is in its own way definitely determined, is not naturally determined. It is constituted by an act of self-consciousness which is not a natural event, an act in which the agent presents to himself a certain idea of himself—of himself doing or himself enjoying—as an idea of which the realisation forms for the time his greatest good. It is true that the moral quality of this act, its virtue or its vice, depends on the character of the agent. It is this that determines what the kind of greatest personal good, which under any set of circumstances he presents to himself, shall be. This character, in turn, has had its history, just as a man's developed intelligence, as it at any time stands, has had a history. But, just as this latter history, though to call it a history of an eternal consciousness would be a contradiction, has yet taken its distinctive nature, as a history of *intelligence*, from a certain action of an eternal self-distinguishing consciousness upon the processes of feeling; so the history of human character has been one in which the same consciousness has throughout been operative upon wants of animal origin, yielding in its action upon them that specific product which we call the history of human character.

The view which it is sought to convey may be made more plain by an instance. When Esau sells his birthright for a mess of pottage, his motive, we might be apt hastily to say, is an animal want. On reflection, if by "motive" is meant that which an action represents or expresses, the inner side of that of which the action is the outer, we shall find that it is not so. The motive lies in the presentation of an idea of himself as enjoying the pleasure of eating the pottage, or (which comes practically to the same thing) as relieved from the pain of hunger. Plainly, but for his hunger Esau could have no such motive. But for it his presentation of himself as a subject of pleasure could have taken no such form. But the hunger is not the presentation of himself as the subject of pleasure, still less the presentation of that particular pleasure as under the circumstances his greatest good: and therefore it is not his motive. If the action were determined directly by the hunger, it would have no moral character, any more than have actions done in sleep, or strictly under compulsion, or from accident, or (so far as we know) the actions of animals. Since, however, it is not the hunger as a natural force, but his own conception of himself, as finding for the time his greatest good in the satisfaction of hunger, that determines the act, Esau recognises himself as the author of the act. He imputes it to himself, and it is morally imputable to him—an act for which he is accountable, to which praise or blame are appropriate. If evil follows from it—whether in the shape of punishment inflicted by a superior, or of calamity ensuing in the course of nature to himself or those in whom he is interested—he is aware that he himself has brought it on himself. Hence remorse, and with it the possibility of change of heart. He may "find no place for repentance" in the sense of cancelling or getting rid of the evil which his act has caused; but in another sense the recognition of himself as the author of the evil is, in promise and potency, itself repentance.

"But how," it will be asked, "does this analysis of Esau's motive affect the question of his moral freedom?" We admit at once that if he is not free or self-determined in his motive, he is not free at all. To a will free in the sense of unmotivated we can attach no meaning whatever. Of the relation between will and desire more shall be said in the sequel. For the present the statement may suffice, that we know of no other expression of will but a motive in the sense above explained, or, as it may be called to avoid ambiguity, a strongest motive. Such a motive is the will in act. The question as to the freedom of the will we take to be a question as to the origin of such a strongest motive. The assertion that Esau's motive, and with it the action which expresses his character, is the joint outcome of his

circumstances and character, however true it may be, throws little light on the matter, unless followed by some further analysis of the circumstances and character. One "circumstance," no doubt, is his hunger, and this has a definite physical history. The physiologist, with sufficient knowledge and opportunity of examination, could trace its determining antecedents with the utmost precision. But even this hunger, *as it affects Esau's action*, is not really what it would be in relation to a merely natural agent, any more than the visual sensation, which this flower conveys to an intelligent person who attends to it, is really the same as that which it conveys to a merely sentient animal. The want in the one case, the sensation in the other, may rightly be abstracted from the self-consciousness by relation to which, in the cases supposed, it is really determined, for the purpose of investigating those natural conditions and antecedents which are unaffected by that relation; but it must not be forgotten that there *is* an abstraction in so treating it, and that, when the moral bearing of the want is in question, the abstraction may become misleading. The circumstances, which in combination with character affect moral action, just because they are so combined, are no longer what they would be merely as circumstances. They are not like forces converging on an inert body which does not itself modify the direction of the resulting motion. Thus even a circumstance in itself and in its antecedents so strictly physical as hunger, if it is Esau's hunger—the hunger of an agent morally endowed—has in effect a quality not determined by natural antecedents. Of the other circumstances bearing on Esau's action, or of the most important among them, it could not be admitted that they are merely physical at all, even in their origin or antecedents as distinct from their bearing on his act. We may perhaps classify them roughly under three heads—the state of his health, the outward manner of his life (including his family arrangements and the mode in which he maintains himself and his family), and the standard of social expectation on the part of those whom he recognises as his equals. All these have their weight in affecting the result which his character yields under the pressure of animal want, but they are all of them influences which have come to be what they are through processes in which human character or will has been an essential factor. Just as the result to which they contribute in his conduct, only arises from the particular mode in which the self-presenting and self-seeking Ego in him reacts upon them, so it is only through previous conduct similarly determined, on his own part or that of others, that such circumstances have taken their actual shape. Their formation at every stage has indeed been affected by events which, like the particular experience of

hunger in Esau's case, have each had their definite chain of physical antecedents; but it has only been as determined by relation to the human self that these events have yielded the given result in the shape of these particular circumstances. In the last resort, then, we are thrown back on the question of the character of the agency so exerted, alike in the formation of those circumstances by which the motive expressed in any moral action is affected, and in that reaction of the man upon the circumstances which actually yields that motive.

When we thus speak of the human self, or the man, reacting upon circumstances, giving shape to them, taking a motive from them, what is it exactly that we mean by this self or man? The answer must be the same as was given to a corresponding question in regard to the self-conscious principle implied in our knowledge. We mean by it a certain reproduction of itself on the part of the eternal self-conscious subject of the world—a reproduction of itself to which it makes the processes of animal life organic, and which is qualified and limited by the nature of those processes, but which is so far essentially a reproduction of the one supreme subject, implied in the existence of the world, that the product carries with it under all its limitations and qualifications the characteristic of being an object to itself. It is the particular human self or person, we hold, thus constituted, that in every moral action, virtuous or vicious, presents to itself some possible state or achievement of its own as for the time its greatest good, and acts for the sake of that good. The kind of good which at any point in his life the person presents to himself as greatest depends, we admit, on his past experience—his past passion and action—and on circumstances. But throughout the past experience he has been an object to himself, and thus the author of his acts in the sense just stated. And as for the circumstances, in the first place they only affect his action through the medium of that idea of his own good upon which he makes them converge; and, secondly, in respect of that part of them which is most important in its bearing on conduct, they themselves presuppose personal, self-seeking¹ agency of the kind described.

It will probably be objected that it makes no practical difference to the moral freedom of the individual, whether or no circumstances by which he is influenced are of strictly natural or of specially human origin, so long as it is not to the individual's own action that they are due. That there is a sense of

¹ The distinction between that sort of self-seeking which is the characteristic of all action susceptible of moral attributes, and that which is specially characteristic of bad moral action, will be considered in the sequel.

"freedom," indeed, in which it is very differently affected by such a "circumstance" as hunger or imminent death, and by such another "circumstance" as the customs and expectations of a society to which the individual belongs, will hardly be disputed. The freedom of an action must be taken to mean simply its imputability in the juristic sense, if it is alleged that it makes no difference to its freedom whether the agent is influenced in doing it by the circumstance of pressing physical need, or by the circumstance that his honour is appealed to by his family or his state. Before taking further notice, however, of the very various senses in which freedom is asserted of man, and of the relation in which our doctrine stands to them, it will be well to guard against further liability to misapprehension in respect of the doctrine itself.

T. H. GREEN.

NOTE.—It will be obvious, from the last sentence of the above paper, that the discussion is left unfinished; and the Editor of *MIND* permits me to add a few words respecting the three articles by the late Professor Green, which have appeared in the *Journal* during the present year.

They form the opening portions of a work on which Professor Green had been engaged for some years before his unlooked-for death in March. The book was to be entitled *Prolegomena to Ethics*. The part hitherto printed amounts, perhaps, to a fifth of the whole; and only about twenty pages remained to be written. The manuscript was entrusted to me, and I hope it may be published by the end of this year.

It would be out of place here to describe the contents of the book; but I may, in my own words but by the help of some introductory pages not yet printed, indicate its purpose, in so far as these three articles are specially concerned. In these pages Professor Green notices a state of mind common among educated men. They are ready to accept the current notion that the subject-matter of moral science differs in no essential respect from that of the physical sciences, and to consider the acceptance of this notion as a *sine qua non* of any moral philosophy worth attending to. Yet at the same time they, or the best of them, are greatly affected, through the medium of poetry, by ideas about human life which cannot be reconciled with this notion; and though they cannot in consistency regard such ideas as scientifically true, they practically find in them the expression of their deepest convictions. This state of things really means, however, that their deepest convictions exist only on 'scientific sufferance,' instead of being examined and reduced to a form in which they can be accepted as truth. And the way to such an examination is barred by the fixed idea that there is no essential difference between the moral action of man and the phenomena dealt with by some of the physical sciences.

This was the question, therefore, with which Professor Green thought it best to deal first of all. He was well aware of the disadvantage of placing the most difficult and abstract part of his reasonings in the fore-front of his book, but he was convinced that a moral philosophy which left the metaphysical question undiscussed behind it was utterly insecure, however much it might contain that was true and valuable. The later portions of the *Prolegomena to Ethics* deal with questions more concrete and more generally attractive than these earlier discussions, but they depend essentially upon them.

A. C. BRADLEY.

II.—THE UTILITARIAN ‘OUGHT’.

THERE is but one drawback to the delight of reading an author so eminently clear in thought and expression as Mr. A. J. Balfour—namely, that if a single page in a hundred gives one pause, the resulting puzzlement and self-distrust are irritating just in proportion to the ease with which the other ninety-nine have been followed. It was in the hope of relief from this irritation, produced in me by one or two points in his very original discussion of the Philosophy of Ethics, that I began the following remarks; which, though in the end perhaps rather positive than critical, will gain clearness by being presented in connexion with their origin.

Mr. Balfour says (in *A Defence of Philosophic Doubt*, p. 21) that “the whole of our morality must be deduced from general principles which are not, and which cannot be, themselves inferences from particulars”. Expanding his view in an Appendix, he defines an ethical proposition as one “which prescribes an action with reference to an end,” the *fundamental* proposition, or major premiss for any ethical deduction, being that such and such an end for me is final and chosen for itself alone; and to such propositions, over and above the character already mentioned of being essentially *general* and not inferences from particulars, he attributes the further character of being essentially *non-scientific* and not based on experience. The great peculiarity of the above definition of ethical propositions clearly is that it includes *non-moral* and *immoral* propositions equally with moral ones, and gets rid therefore of the *differentia* of the latter which has been held to consist in universal obligation: in other words, “*I ought to do so and so*” can only mean “*I find or consider so and so binding on me,*” and can never lead on to “*You ought to consider it binding on you*”. Nor is there any escape from this conclusion, if Mr. Balfour’s account of ethical propositions is exhaustively correct in respect of all systems. My first object is to show that in respect of at any rate *one* system, Utilitarianism (in Mr. Sidgwick’s sense of Universalistic Hedonism), it is *not* exhaustively correct; and my mode of doing this will be by inquiring to what extent the two characteristics above mentioned apply to the basis of that system—that is to say, whether, or in what sense, the basis of Utilitarianism is (1) non-scientific, (2) general and not an inference from particulars.

Mr. Balfour defines Science (p. 1) as “knowledge of phenomena and the relations subsisting between phenomena”. Roughly speaking, he says, a scientific proposition “may be said

to state facts or events real or hypothetical," which description, he holds, does not apply to a proposition announcing obligation. "I ought to speak the truth" "does not announce an event; and if some people would say that it stated a fact, it is not certainly a fact either of the 'external' or of the 'internal' world," *i.e.*, either of physics in the widest sense or of psychology.¹ Now the proposition "I ought to speak the truth" is clearly with most thinking persons only a conclusion from some more fundamental proposition; the major premiss of the implied syllogism being, for the Utilitarian, "I ought to do that which promotes the greatest happiness," or some kindred phrase. My contention, then, is that this utilitarian major premiss is not simple but compound, and that it is made up of two simple elements, an ultimate *fact* and an ultimate *axiom*, which fact and axiom are both in nature entirely scientific.

Before examining them I may concede at once that the basis of the system, as commonly stated, does undoubtedly come within the range of Mr. Balfour's description: for reasons which will appear as we go on, however, I should be glad to begin by stating it in this form, and examine the results, before stating it in my own. As commonly conceived, then, the fact may be thus expressed:—I find my happiness to be a desirable end; and as multitudes agree with me in this experience, it may be further asserted that the happiness of each of these individuals is in the same sense a desirable end. We now come to the axiom, which may be put thus:—the happiness of A, and that of B, and that of C, being each in the same sense a desirable end, the happiness of A *plus* the happiness of B is more of a desirable end, or a more desirable end, than the equal happiness of C. Now at this point an *ought* clearly comes in; for I should say that any one considering the case *ought* to admit the truth of this axiom. And in using such terms, I at any rate *can* limit myself to the same meaning as when I say that any one who considers whether a whole is

¹ I must remark that Mr. Balfour in this Appendix seems unduly to confine the word *psychology* to the *history* of mental development and of the causes and origins of mental facts—a subject which, I quite agree with him, is wholly outside Ethics. This limitation of meaning is probably accidental, as for his purpose there was no special object in distinguishing psychology as occupied with causes and origins from the psychology which examines the facts *as they are*, apart from their causes and origins. It happens, however, that for the contention I am about to put forward this latter sense of the word is all-essential, nor do I think Mr. Balfour would deny its legitimacy: all I need ask him to admit is that the assertion "Sugar is sweet," or "It is often pleasant to stretch oneself," is as truly psychological, as much therefore a statement of scientific fact, as the assertion, *e.g.*, that the moral sense, or the pleasure of visual form, has been developed greatly through association.

greater than its part *ought* to decide in the affirmative. That which Mr. Balfour holds to be the *differentia* of ethical, *i.e.*, according to him of non-scientific, propositions, I hold equally applicable to the axioms of Mathematics, each of which is by implication "a proposition announcing obligation, which itself requires no proof"; and equally in their case the assertion of obligation, if denied, leaves the asserter without any argumentative reply. Practically, I should say that the chances of denial are equally remote in the two cases; that every one, who finds happiness to be desirable at all, will, on exercising his reason, perceive the happiness of the greater number to be more desirable than that of the smaller; and that though, if he be C and an egoist, he may prefer C's happiness to the similar happiness of A and B, his reason can have no part in that preference, in which he will not expect any impartial and rational fellow-creature to concur.

Why, then, is the Utilitarian system, as thus based, open to the charge of being non-scientific? The usual answer of course would be that in passing beyond the theoretic statement, and bringing the axiom of greater desirability into relation to *conduct*, we introduce a sense of *duty* which is essentially non-scientific. I shall have to speak of this further on; and will only here remark that the answer at any rate does not seem open to Mr. Balfour; who, clearly perceiving Ethics to be concerned not with the causes but with the reasons for action, has pointed out that it would remain wholly unchanged if not a single man ever had done or *ever could* do right. *Duty* surely implies *possibility*. But waiving this, and deferring the question whether in relating the *ought* to action we shall really affect its scientific character, I want first to show how, even restricting it to theoretic ground, we still cannot thereby make our system scientific. For though the *axiom* be scientific, the *fact* to which it was applied is not. As above given, the direct axiomatic judgment that the happiness of the greater number ought to be preferred as the more desirable end, presupposes that the happiness of each individual is already absolutely desirable, in the sense not of that which is *desired* or *capable* of being desired, but of that which *ought* to be desired.¹ And this primary judgment, that

¹ This distinction, as is well known, was overlooked by Mill, who assumes as self-evident that that is "*desirable*" which "people *do actually desire*"; and thus, after showing that what each desires for himself is a good, that this good is happiness, and so that general happiness is a "good to the aggregate," he can imagine himself to have given a complete proof that the general happiness is what each individual *ought* to desire. Mr. Balfour's expressions seem open to a similar charge of ambiguity. His assertion that the fundamental ethical proposition of every ethical system states an end which an adherent of that system "regards as final—as chosen for

the individual happiness *ought* to be desired, is an ethical and not a scientific judgment: the *ought* (granting for the moment that it can be legitimately used) is of a totally different sort from the scientific *ought* which came in with the axiom; the fact of the difference being as intuitively felt as the sense of the *ought* in either case. Is it possible then to find some other way of basing the Utilitarian system, which shall contain no *ought* except the axiomatic one? It seems to me that this may be done as follows.

Assuming that people desire their own happiness, I take as the primary fact "I feel a desire (not only for my but) for your happiness". This fact is clearly psychological and scientific, announcing no obligation. A similar description applies to the more extended form, "I feel a desire for the general happiness,"¹ which is just as scientific as "Sugar gratifies my palate". For simplicity's sake let me reduce this latter form to "I feel a desire for the happiness of x , y , and z , all strangers to me". I now go on to say "I desire the happiness of x and y more than the equal happiness of z ". But I now claim to bring in the axiomatic *ought*, and say that I *ought* so to desire; the fact which justifies my doing so being simply the fact that a *comparison* has been instituted, and an alternative presented which needs to be reasonably decided one way or the other.² The sense of axiomatic obligation attaches not to the *desire* where there is no alternative, but to the *preference* where there is an alternative. As long as my or any other happiness is considered absolutely, I do not feel that I can make a distinction between "I *ought* to desire" and "I *do* desire". Imagining myself alone on a desert island, I feel that "I ought to"

itself alone," can only be reconciled with the statement (which Mr. Balfour rightly calls tautological) that ethical propositions announce obligation, by taking the words "chosen for itself alone" as = "one which he *ought* to choose for itself alone". The fundamental proposition, according to the literal meaning of Mr. Balfour's words, would lack, and lead to deductions lacking, any ethical or obligatory character at all. How, for instance, is "I choose my own pleasure for itself alone" other than a scientific statement of pure fact? And even if I say "I cannot help so choosing," it is a scientific statement of compulsion, not an ethical statement of obligation.

¹ It is to be noted that this proposition is one to which practically every one may be held to subscribe; since only those could be held to deny it who, if convinced that the general happiness could be secured by their lifting a finger, would refuse to do so.

² The comparison may take place even within the limits of individual experience, *e.g.*, where there is a conscious weighing of a lesser and nearer against a greater and more remote pleasure, in cases where we can eliminate the ordinary bird-in-the-hand notion which depends on the comparative uncertainty of the future.

would simply signify "I mean to"; and if there had never been such a thing as comparison or conflict of interests, if the gratification of every one's desires had always been completely compatible with that of every one else's, and the gratification of present desires with that of future ones, I do not see how the idea of an ethical ought could ever have presented itself: every one who felt a desire for others' happiness would have felt that desire to be as natural and as little obligatory as I should feel my desire for my own happiness to be on a desert island. I do not think that even the fact that other people did not share the feeling could have suggested the judgment that they *ought* to share it, inasmuch as *ex hypothesi* such absence of intuition on their part would not have had any effect in preventing or diminishing any one's happiness. But as soon as an alternative is presented, as soon as I am asked whether, of three equal actual ends of mine, the happiness of *x* and of *y* and of *z*, I prefer the result that *one* should be attained and *two* unattained, or that *two* should be attained and *one* unattained, I cannot decide on the latter without at the same time feeling that I am under a reasonable obligation to decide on it, precisely similar to that which drives me to admit in any other case that two is greater than one. And having arrived at this point, I seem to have reached ground on which I can make myself the *z* of the alternative without altering my sense of obligation: if a particular choice appears reasonable to me when the letters are merely the symbols of some three real but still unknown individuals, nothing can make it appear *reasonable* to me that I should alter my choice (though very likely I should alter it) when I find that *z* is to be myself. Had I known this to begin with, had the question never been presented to me except with *z* as myself, I might well have been unable to apply the axiom, because there would have been no principle of conduct to confront with the very probable fact that my happiness is actually more desired by me than that of *x* and *y*: but after passing through the stage of considering and deciding the alternative on impartial and purely reasonable ground, I cannot afterwards, when no change is introduced except that a particular name, my own, is given to *z*, decide *differently* and at the same time feel that I am deciding *reasonably*. If I egoistically prefer *z*'s, *i.e.*, my own, happiness as the end most desired by me, it is simply an "I mean to," not an "I ought to". Reason will have nothing to say to it; that is, though I may not be acting *unreasonably*, I shall certainly be acting *non-reasonably*; just as, to anticipate a future point, I hold myself to be acting not unreasonably but non-reasonably in seeking my own happiness when there is no alternative in question. And if the one decision is thus non-reasonable, the

other must be reasonable, unless the alternative admits from me of no reasonable solution.

The *primâ facie* illegitimacy of this argument lies, of course, in my having applied an axiom, and so got an *ought*, on the understanding that a certain thing (the happiness of *x* and *y*) is the thing actually *by me more* desired, and retaining the *ought* even when that thing has become, it may be, the thing *by me less* desired. But on reflection there does not seem to be anything essential to the reasonableness of the comparison and the validity of the decision in the fact of its being my own particular mind in which the compared desires, the actual terms of the comparison, as well as the comparison itself, take place. The decision that of two things which are essentially ends, the greater, *i.e.*, that which has most end-stuff in it, must *quâ* end prevail; that in reason the end cannot but be preferred for which there is actually going the greater amount of desire; if valid when the lesser end and the two which together make up the greater end are all desires of mine, loses nothing of its axiomatic cogency by a change in the mental *habitat* of one or more of the desires; any more than the axiom "things which are equal to the same thing are equal to one another" loses in cogency by a change of the position in space of some particular trio of equal things. The perception of the *more* end-stuff, the *more* of that the essence of which is to direct action, cannot be affected by the fact that the *less* with which it is compared has its place in *my* mind, and through that momentary proximity *looks* more to me. And what my egoism may make it impossible for me to prefer in my actual desire still remains for me what it is reasonable to aim at in my conduct, which, to be reasonable, must follow my axiom and not my accidental desire; the difficulty of keeping my axiom in the form "ought to prefer or desire" something which, it may be, I *cannot* prefer or desire being relieved just by this power of preferring *in conduct*, by this possibility of converting the "ought to desire" into "ought to aim at". If the axiom were confined to desire, to the exclusion of conduct, it might be represented that desire and volition, with their tendency to act independently of reason, produce in any axiom into which they enter an essential difference from other quantitative axioms; for while one can say not only that the whole *ought* to be acknowledged as greater than its part, but that to any individual at any moment it *does* appear so, one cannot say that to any individual at any moment the sum of two desires directed to equal ends appears, but only that it ought to be acknowledged as, greater than one. Egoism may make it *appear* less; and if it were then *impossible* for me to acknowledge it greater, the scientific character of the axiom that I *ought* so to acknowledge

it would certainly suffer; but conduct gives me a means of showing, and of knowing, that I acknowledge it greater even in the teeth of my own egoistic desire. Here then we seem to have got what we sought, a utilitarian basis with no *ought* in it except the scientific or axiomatic one; and with this explanation I need not scruple to speak of the basis as formed by the application of an axiom to a fact, even though the application may require too much reflection to be the immediate intuition of a moment.

The cause of the prevalent instinct that the obligation of assent is radically different in the case of ethical and of scientific principles, seems to be that in asserting that we believe scientific axioms we rarely have occasion to add distinctly, even in thought, the words "and so ought you"; whereas in asserting ethical axioms, those words represent as a rule what is most prominent in our intention. For in the subject-matter of Science there are never any temptations for men to set at nought the rational axioms, which are therefore accepted practically as well as theoretically. But in the subject-matter of Ethics such temptations are numerous; and we seek to bring other people's actions into conformity with our principle, by keeping perpetually before their eyes the fact that theoretically it is also *their* principle—the principle which as rational beings they cannot but admit to state the rational end of conduct, and which therefore they can only transgress under pain of running counter to their reason. But no difference of nature is here implied between the theoretical and the practical *ought*; the former means "must hold, as a rational being"; the latter means "must do, under pain of running counter to reason"; which clearly in no way extends the meaning of the obligation. Ends are of course essentially different from anything else, such as iron, which can be quantitatively estimated, and there must accordingly always remain a sense in which the difference between an axiomatic statement of duty and an axiomatic statement of fact may be called essential; but this difference lies in the *subject-matter* to which the axiomatic *ought* is applied, not to the *form* or *oughtness*. I do not of course deny that the meaning of the practical *ought* may be extended by Utilitarians, as it is by moralists of other schools, in such a manner as to justify Mr. Balfour's view of its non-scientific character: all I am concerned to show is that it *can* be used in my sense, and that then the parallelism can be made complete between the ethical and the scientific series of propositions. "You find (experientially) that a pound has weight; you ought (theoretically and rationally) to hold that two pounds have more weight; if you wish to avoid absurdity, you ought (practically and rationally) to sink a plummet with the latter

rather than the former." "You find (experientially) that the happiness of an individual is an end; you ought (theoretically and rationally) to hold that the happiness of a plurality of individuals is more of an end; if you wish to avoid absurdity, you ought (practically and rationally) to promote the latter rather than the former." In both series the final imperative is in form hypothetical: but in the second it becomes truly categorical, in so far as everyone whose mind acts at all shrinks inevitably from the jar of being consciously absurd. And even if this imperative were regarded not as supplanting but as supplementing an *ought* of purely ethical intuition, its share in that uniform and passionless certainty which is common to scientific axioms might still give it for many minds very great practical value.

But it may be said that there is still one peculiarity of the ethical *ought* which, even after the scientific character of the utilitarian proposition has been carried as far as I have carried it, remains irreducible; the fact, as expressed by Mr. Sidgwick, that an ethical proposition is "inseparably combined with an *impulse* to action of a peculiar kind, which it is necessary to distinguish from non-rational desires or inclinations"; that the cognition of rightness is "the cognition of a dictate or precept of Reason," which phrase "implies that in rational beings as such this cognition of rightness gives an *impulse* or motive to action". Now this impulse or motive to action can clearly only exist for me in relation to my own action; so that if its presence is made essential to the utilitarian proposition *quâ* ethical, I shall never be able to use that proposition either generally, as "The greatest happiness ought to be aimed at," or particularly, in the second person, as "You ought to aim at the greatest happiness". I do not think, however, that Mr. Sidgwick would allow the essential difference, implied in Mr. Balfour's view, between *ought* in the first and *ought* in the second person; and in that case, as I can see here no *via media* between Mr. Balfour's view and my own, I can only maintain that Mr. Sidgwick's sentences must be susceptible of interpretation in a sense consistent with the essentially scientific character of the utilitarian proposition, even as used in the first person. I should say, then, that the scientific character of that proposition is not affected by the mere fact of its being combined with an impulse. The judgment "This smell is disagreeable" is inseparable from an impulse to get away from the smell, but it is none the less a scientific proposition; and the difference between such a proposition and the utilitarian one lies simply in the latter's having an end as its subject-matter, and so stating, as scientifically reasonable, the precise fact which the impulse repeats: "I ought, scientifically, to recognise the superior dimensions of a certain end, and my impulse corresponds with

my cognition". Not that I would deny to the ethical proposition, as I perpetually make it, a peculiarity intuitively felt as such, and transcending the ground of scientific assertion even when that assertion is taken as inclusive of an impulse; but that peculiarity does not for me reside in the proposition *quod* proposition, but in the further mental condition in which it is often affirmed. As the above-mentioned impulse does not present itself in the "*You ought*" but only in the "*I ought*," so I should say that this further peculiarity does not present itself even in the "*I ought*," till that proposition is more or less deliberately and definitely related by me to my actual future conduct; the peculiarity then consisting just in what was noticed above, a unique sense of jar and conflict if conduct and reason are allowed to fall out of unison—an ultimate dislike to allow conduct to become unreasonable, such as I find otherwise exemplified in my refraining several times a day from doing some perfectly indifferent and trivial action, the idea of which comes across me, but of which I simply feel that its purposeless performance would lack rationality. And it seems to me that I am justified by Mr. Sidgwick himself in thus assuming the sufficiency in Ethics of reasonableness and unreasonableness as essential and ultimate notions. For in considering the strange persistency of the question "Why should I do what I see to be right?" and in accounting for it most happily by showing that *several different views* of the ultimate reasonableness of conduct exist side by side in the thought of ordinary men, so that an answer from one point of view always allows the question to slip round again from another, he seems to imply that, could these views of ultimate reasonableness be harmonised or reduced to one, the question "Why should I do what I see to be right" would be set at rest,—which in turn must surely imply that the judgment "*I ought*" need not be in essence anything more than ultimately reasonable, however peculiarly coloured in the process of relating it to one's actual conduct. I may further suggest that, on Mr. Sidgwick's view that the desire for one's own happiness, or "rational self-love," is one ultimate principle, and, as such, inclusive of the "peculiar" ethical impulse "which it is necessary to distinguish from non-rational desires and inclinations," this impulse must after all have such an enormous range of application that its *peculiarity* will not prevent its being rather the rule than the exception.

To return now to our analysis of the utilitarian proposition: we have seen how it is in the supervention of the axiom on the primary fact of experience that the scientific *ought* comes in; but I should say further that this too is the point at which the

proposition becomes *rational*, as opposed (not to irrational but) to *non-rational*. Thus when Mr. Balfour expresses his view of the non-scientific character of ethical propositions by saying that "the rational basis" of any ethical system "must be something other than an experience or a series of experiences," I am able to endorse his words; only I should apply them similarly to many scientific systems. I imagine that the basis of any system dealing with quantities, in order to be *rational*, must include more than mere facts of experience, such as "Stones have weight," or "Happiness is a desired end". It must include at least one axiom: that is, it must include something in which the mind does more than merely receive and record; something in which it is active, even though the activity be no more than trying to conceive the opposite and finding itself baffled in the effort. In Ethics the primary experiential basis, that happiness is an end, becomes rationalised only when I superpose the axiom, and assert that the happiness of the greater number must be acknowledged a more abundant end than that of the smaller. Similarly the fact of experience that a cubic foot of iron has weight only becomes part of a *rational* basis for mechanics when we superpose some axiom, and say, *e.g.*, that two such cubic feet must be acknowledged to have more weight; not till then can we perceive power to be economised by a lever which makes use of the former to raise the latter. Another consideration is this: if the mere taking happiness as an end is to be held reasonable, a mollusc often shows itself reasonable; while yet, as we do not attribute to it reason, its reasonableness is a matter not of its but of our perception. It is surely best to avoid language which would thus drive us to predicate a reasonableness divorced from reason and unknowable by its possessor.

It will be at once seen that to limit the use of the word *rational* in the way I suggest is not by any means to make Utilitarianism the only strictly rational system. For, in the first place, the intuitions which can strictly be called rational are not confined to quantitative axioms. Thus the ultimate mode of inference of the ordinary syllogism is rational, and its validity matter of universal intuition; so that any ethical basis which can be represented as the necessary conclusion of such a syllogism, will be at least formally rational, whatever its premisses may be. For instance, "The message of revealed religion emanates from Omniscience; the rules of revealed religion as to what we ought to do are part of its message; therefore the rules of revealed religion as to what we ought to do emanate from Omniscience, *i.e.*, from a source which *knows* what we ought to do"; or, in other words, we ought to do what revealed religion prescribes.

I have to admit that, so far as the major premiss of this syllogism is to anyone as certain an intuition (or a conclusion from intuitions as certain) as that happiness is an end, his ethical basis is as rational as mine, and he can equally demand that all who agree in his primary intuition or intuitions shall accept that basis. But this objection to the uniqueness of the utilitarian basis (whatever it may be worth) could not be brought by Mr. Balfour, inasmuch as he could not consistently accept the conclusion from a syllogism as an ethical basis at all; for he says it is obvious that the several principles at the base of all ethical systems must of necessity be *underived* and require no proof. This assertion seems to me to require, on its own account, a great deal of proof; none, however, is offered by Mr. Balfour, who contents himself with describing the impossibility of deriving propositions of obligation from any other propositions as "an axiom". And in the second place, the quantitative axiom itself is of course applicable to the primary statement of something else than happiness as the desired end, *e.g.*, perfection: but the number of those who adopt the basis of Perfectionism, while clearly distinguishing it from that of Utilitarianism, is so small as to be safely neglected. It may thus, I think, be said that only in the utilitarian system can an extremely common individual experience of feeling be supplemented and universalised by the axiom or intuition of reason, and the "I ought" thus pass over directly to the "You ought".

According to this view, I should avoid using *rational* to mark the distinction drawn by Mr. Sidgwick between the two principles of Egoistic Hedonism. "If the Egoist strictly confines himself to stating his conviction that he ought to take his own happiness or pleasure as his ultimate end, there seems no opening for any line of reasoning to lead him to Universalistic Hedonism as a first principle. . . . When however the Egoist offers, either as a reason for his egoistic principle, or as another form of stating it, the proposition that his happiness or pleasure is Good, not only *for him* but absolutely, he gives the ground needed for such a proof. For we can then point out to him that *his* happiness cannot be a more important part of Good, taken universally, than the equal happiness of any other person." That is to say, the latter proposition is plainly irrational; but on what terms can the former be called rational? Only at the most, surely, as long as the happiness of the individual Egoist does not conflict with that of two or more others. In the extreme case of his being on a desert island, it might seem pedantic to object to calling his exclusive seeking of his own happiness rational, though even here I should prefer *not irrational*; but even in that extreme case, I should not see the

rationality of his saying that he *ought* to seek it. Waiving the objection above suggested that he could not truly feel he *ought* to in any sense distinct from he *means* to, and granting for the moment that he could so feel, what is there in point of *rationality* to distinguish that feeling from the feeling of warmth or of hunger? Is any safe ground of definition to be found for *rational*, if once one allows the extension of the word to propositions which do no more than state an individual experience, and to which no assent of others can be "rationally" expected? But waiving even this second point, supposing it allowable to call his Egoism "rational" as long as nothing but his own experience is concerned; yet as soon as the conflict of his, an individual's, happiness with that of several others is suggested to him, the foregoing considerations, if correct, seem to make it impossible that his *reason* should remain at the individualistic standpoint, whatever his conduct may do. He can no more resist the axiom that two is greater than one in a comparison of desires or ends than in the case of any other measurable subject-matter. I should say, then, that there is no shutting out such a "line of reasoning" as will "lead him," *i.e.*, his reason, "to Universalistic Hedonism"—which only exhibits under another form my previous slight divergence from Mr. Sidgwick, in emphasising the special axiomatic character and neglecting the common ethical impulse, when it is a question of fixing the real essence of the utilitarian *ought*.

And this same distinction of rationality, and so of universality, will of course mark off any utilitarian proposition from the non-moral and immoral ones which are included with it in Mr. Balfour's definition of the essence of an ethical judgment. The connexion between obligation and *rationality* (in the strict sense which I have been defending) cuts the ground from under his refutation of the connexion between the obligation of a moral law and its *universality* (in the sense that all intelligences ought to regard themselves as bound by it). He says we may dismiss this connexion, because it amounts to saying that there is a *moral law* obliging all intelligences to be bound by other moral laws, and that this law would need in turn another moral law behind it, so that we should be committed to an infinite series. But, according to my argument, the assertion that "all intelligences *ought* to regard themselves as bound" is not a *moral law* but a *scientific* assertion; provided that for "all intelligences" we substitute "all intelligences which share the primary non-ethical intuition that happiness is a desired end". The substituted words will not suggest to the Utilitarian a very large concession, part of his business being to prove that they potentially include "all"; *e.g.*, to show that the desire for one's

own or others' happiness is implicit in motives where its presence is overlooked, and to dispel prejudices which prevent the admission of this, by pointing out that the utilitarian principle produces rules of conduct identical with those approved by holders of would-be adverse principles; and so far as he succeeds, his law is universal, just because it is axiomatic and so in the strictest sense rational. And to all who share that primary intuition about happiness, the cogency of the law may be immediately asserted, however little they may have been aware of it; the universal cogency of the axiom that the whole is greater than its part, or that two is greater than one, being quite unaffected by the fact that some one has never chanced to bring it to bear on some particular subject-matter. However many people took to denying those axioms, those who still held them would still feel that every one *ought* to admit them. And this alone seems sufficient to refute another of Mr. Balfour's individualistic *dicta*, namely, that "to be bound by a moral law is exactly the same thing as to regard it as binding on you".¹

It is worth while to note in passing the point of practical difference between a state of things where each individual merely felt it to be *his* duty to make the happiness of others his end, which of course would be the utmost limit of Utilitarianism attainable on Mr. Balfour's principle, and the ideal of true Universalistic Hedonism, where, with the same feeling as to his own duty, each would feel that it was also the duty of others. The sense of solidarity and security derivable from the sense that it is incumbent on others to regard my happiness, seems to me fully as important as that probable increase of my happiness through my own altruistic impulses which has been a hundred times more dwelt on, and which of course might exist as well on Mr. Balfour's principle as on mine.

So much for the question as to the scientific and rational character of the utilitarian proposition. I pass now to my second question,—in what way can that proposition be said to be *general* and not an inference from particulars? If we recur to our former analysis, the primary *fact*, "I desire your happiness, or everybody's happiness," or "I find such happiness an end," is clearly general only in the sense of shortly summing up a number of particular cases of my experience, each of them as

¹ This *dictum*, which Mr. Balfour again puts forward as self-evident and without proof, would be still more markedly contradicted if the syllogistic conclusion above suggested, that the precepts of revealed religion ought to be obeyed, were a valid ethical basis; which depends of course on the truth of the non-ethical premiss that such religion is the voice of Omniscience. Granting that, the *universal* validity of the conclusion would remain wholly unaffected by any individual's omission to perceive it.

certain as the collective statement, which has no authority beyond their certainty; it is based on particulars just as "I find sugar sweet" is based on particulars. And as regards the supervening *axiom*, that, the happiness of an individual being an end, the more the individuals the greater the end, we have only to apply Mr. Balfour's own account of the axioms of Mathematics (p. 9), where he points out that "'two hundred and forty pence and twenty shillings being each equal to a pound, are equal to one another,' is one of an indefinite number of similar self-evident propositions which are described by saying that 'things which are equal to the same thing are equal to one another,'" but which it would be absurd to *deduce* from that general premiss, inasmuch as the individual conclusion is to begin with as certain as the premiss. The particular cases of deciding that the greater amount of what is essentially a desired end must be acknowledged as more of an end than the lesser amount, do not derive their validity from correspondence with the formula; each is ultimate in itself.

In discussing Utilitarianism I have been confining myself so far to the simplest type of the doctrine. We may of course be called on to decide questions more difficult than the balancing of greater and lesser lumps of individual happiness, or of similar happiness enjoyed by a greater and by a lesser number; *e.g.*, the question of balancing the greater happiness of a lesser against the lesser happiness of a greater number, or the pain of some against the pleasure of others. There are, however, noteworthy gradations of difficulty in such cases, in some of which the scientific certainty seems quite attainable. For example, the assertion that for myself I would not endure a night's toothache for the sake of a day's walk in the country, is as completely a statement of psychological, *i.e.*, of scientific fact as the single terms "I like this," "I dislike that". As to the mode and degree in which pleasures and pains can be estimated and compared by the individual like *plus* and *minus* quantities, this primary psychological fact may present much that is obscure; but there is no obscurity about the fact itself that they *are* so estimated and compared, that in the experience of the individual $+ 6$ will not balance $- 7$. And when I pass on from the individual experience and say, and call on any rational person to say with me, that, taking any couple A and B out of the number who agree in the primary experience, such an amount of pleasure in A *ought not* to be purchased by such an amount of pain in B (*a fortiori* of course in a plurality of Bs) I am merely, as in our former case, supplementing a scientific fact by a scientific axiom. The obligation of admitting that the want of balance between the $+ 6$ of pleasure and the $- 7$ of

pain is independent of the question in what particular individual or individuals the pleasure and pain are exhibited, is precisely on a par with the obligation, *e.g.*, of admitting that the necessary equality in size of things equal in size to the same thing is independent of the question of what particular substance the things are made. The case of weighing the pain of one against the pleasure of several stands on different ground, since here there is no means of applying a self-evident axiom to the data of individual experience. So when I say (taking extreme cases for the sake of clearness) I would not purchase the five minutes' happiness of a thousand people by the five minutes' misery of one, or the eternal happiness of a thousand by the eternal misery of one, I cannot say that any one *ought* to agree with me with the immediate *ought* of rational intuition: I can only show that neither could one who differs from me use the *ought* to me. I should not, however, despair of supporting my opinion here by the less direct method of showing the obligation of justice to be a fair deduction from the fundamental utilitarian proposition; and then maintaining that the only way of bringing justice to bear on the case would be by confronting in turn each member of the thousand with the one whose misery would be the price of his happiness, and deciding in each case that the price is illegitimate. Even so, however, questions are easily imaginable which would admit of no precise mode of decision; as we see if we think of the infinite number of degrees between, *e.g.*, balancing the prolonged happiness of many against the minute's considerable suffering of one (where I think the former might fairly preponderate), and balancing the month's moderate cheerfulness of many against the minute's agony of one (where according to my intuition the former would kick the beam); and just in proportion as this uncertainty and probable difference of opinion exists, I should say that there is no *rational* basis for decision. This may seem to be a considerable concession to Mr. Balfour; practically, however, I doubt if it would often prove so.

On another point in Mr. Balfour's discussion, his account of the moralist's duties, a very few words will suffice; since his view here, being entirely consistent with his view of ultimate ethical propositions, is subject (if I am right) to the same modifications. Holding the essentially non-scientific and individualistic character of those propositions, he naturally holds that the moralist is concerned simply with the fact of their existence, not with the proof of their validity; and that his function is to help each man clearly to ask and answer for himself the two questions, "What do I hold to be the ultimate ends of action? and—If there is more than one such end, how do I estimate them in case of conflict?" In respect of the moral systems

whose fundamental propositions truly answer to Mr. Balfour's description, this account of the moralist's chances seems unassailable. But so far as Utilitarianism is in the strict sense rational, as above contended, its preacher *can* of course occupy himself with the proof of its validity, by getting people to apply the axiom we have been discussing to their individual intuition of happiness as an end.¹ Nor do I quite follow this sentence,—“Above all he (the moralist) must beware of substituting some rude simplification for (what may perhaps be) the complexity of Nature, by deducing (as the Utilitarians do) all subordinate rules from one fundamental principle, when, it may be, this principle only approximately contains actual existing ethical facts”. These actually existing ethical facts are, I suppose, the various ends which individuals actually regard as final. And if, after the clearing away of all confusions, you still hold to some other end than mine, I cannot of course call on you to deduce subordinate rules from my principle rather than from yours; but the actual ends accepted as ultimate are hardly so numerous as to charge me with crude disrespect for the complexity of Nature, if I show that my principle is implicitly avowed in, or is the rational extension of, yours. And as regards the deducing of subordinate rules for myself and my fellow-utilitarians, why am I to beware of it, any more than of deducing my geometry from certain intuitions and axioms which to some one else, for aught I know, are not self-evident?

My last point of difficulty is this: Mr. Balfour says (p. 354) with regard to changes of ethical system, that “what we mean, or ought to mean, by an improvement in the past, is an approach to our own standard, and since any change at all corresponding in magnitude to this in the future must involve a departure from that standard, it must necessarily be a change for the worse”. Now does he mean for the worse according to the ideas then existing in the world, or for the worse according to the view which we, with our present ideas, would take? He can hardly mean the former, since (1) there is absolutely nothing to put the relation between our successors and ourselves on any different footing from that between ourselves and our predecessors, beyond whom we think we have morally advanced; and (2) according to Mr. Balfour's own statement, a superior system of morality means one “which we should adopt if presented to us”; and as our successors may be expected at least to have knowledge of our systems, the hypothesis that they would at the same time

¹ Even a system which would deduce its fundamental principle from God's omniscience, as above suggested, gives the moralist wider scope than Mr. Balfour admits; for indirectly, at any rate, he will be occupied with the proof of his principle, in proving the truth of his non-ethical premiss.

cleave to one admittedly inferior is negatived. But if the supposed future system will only be worse than ours in the sense that we, with our present eyes, should regard it as such, I do not see, in the first place, why that need at all distress us, since it will be better than ours in the eyes of all whom it will actually concern. Mr. Balfour might agree so far, though his tone rather suggests the contrary; but a more radical objection is this. His view implies that change and development of moral systems extends of necessity to the most fundamental principles. Even of the past this is only true within limits; since much of moral philosophy has been concerned with making actual principles explicit, and reconciling apparent contradictions. But, what is more, the process has been *increasingly* of this kind; so that as regards the future I cannot see why we are driven to imagine any change of the most radical kind; why we may not regard the "approach to our standard" which has taken place in the past as likely to continue in the future, and to be more and more an approach of practice to an admitted principle. If the Utilitarian sees the history of the development of his principle to have been the gradual making explicit of the primary intuitions that happiness is desirable, and that of what is essentially desirable the larger amount is the more desirable,—what is there to suggest to him that, if once the principle were universally acknowledged and acted upon, men would begin to gravitate away towards some other principle? To suppose such a tendency seems something like supposing that if once Evolution succeeded in completely adapting species to their environment, it would then begin to reverse its operations and to tend towards the survival of the unfittest. Neither in the evolution of morality nor of physical life has the condition of stable equilibrium been reached, and so change has been perpetual. But the change in the external environment, which, so far as it is continuous, implies a *necessarily* unstable equilibrium in the results of physical evolution, has nothing corresponding to it in the moral sphere; where the changes associated with changing forms of society have followed no blindly cosmical series, but (it is surely not too much to say) have been more and more consciously related to a dimly recognised ideal. Nothing that we can conceive as happening will make happiness less of an end, which, so far as attained through social impulses, is self-confirmatory and self-propagating.

EDMUND GURNEY.

III.—VERSATILITY.

THERE is hardly any subject perhaps of equal importance in the economy of mind about which people's ideas are so vague as what we variously call Versatility, many-sidedness, width as contrasted with depth of intelligence. The psychology of the subject is far from being complete. One would look in vain in most of the text-books for a careful analysis of this peculiar attribute. Yet to understand the conditions of a phenomenon at once so uncommon and so impressive would seem to be not one of the least interesting problems of the science. Then, too, the question of the practical value of this endowment is by no means satisfactorily solved. In general it may be said that practical common-sense is wont to disparage its utility both in life and in literature. This disparagement, however, appears to be rather a protest against what is regarded as a weak sentimental admiration of something that imposes on the imagination than a reasoned judgment. It seems too to be closely connected with a cynical disbelief in the genuineness of the thing admired, a sceptical attitude of mind which is amply illustrated in familiar proverbs. This may at least be said to be true of the common English way of estimating the claims of distinguished versatility. Lastly, as is to be expected from this want of scientific precision in the current ideas of the nature and the value of versatility, the educational treatment of the subject is far from satisfactory. What the real value of breadth of culture amounts to: how far diversity of aptitude should be aimed at rather than the maximum development of the special aptitudes characterising the individual; and how such diversity is to be best secured,—are all questions which the science of education has still to solve.

In the following paper I propose to consider the subject under each of the points of view here indicated. I shall first inquire into the nature of the endowment; after this I shall investigate the grounds of its value or utility; and finally I shall say a word or two about its educational aspects.

At the very outset we must be clear as to the meaning of the term we are going to employ. In ordinary discourse the epithet 'versatile' clearly connotes something above the average or customary. It means an exceptional degree of multiform capability, or distinguishing excellence in several directions. In the scientific treatment of the subject we must of course include less marked degrees of the endowment as well. That is to say, we shall make versatility synonymous with width of faculty, or

diversity of capability in all its measures. When it is needful to bring out the higher manifestations of this power it will be best to use some phrase like 'versatile talent'.

Versatility is thus a phenomenon admitting of degrees, and it becomes a matter of importance to determine how those degrees shall be estimated. The rough and ready way of popular judgment is simply to count the number of different directions in which capability is shown. This is manifestly too vague for our purpose. A truly scientific measurement of the capability would proceed by taking into account not only the number of distinct attainments but also the heights reached in the different paths followed. This method is clearly resorted to in all the more thoughtful estimates of versatile minds. It is recognised that great height of attainment in a few lines of intellectual pursuit is equivalent to a lower degree of proficiency in a much larger number of subjects. The boy who carries off the first prize in three main subjects is reckoned a more brilliant instance of versatility than another who does very well throughout the whole range of school study. It need hardly be observed, perhaps, that in measuring degrees of proficiency in any direction originality will count as higher than merely reproductive ability, since it shows a more powerful and an independent grasp of the subject.

The exact way of measuring this mental attribute would take into consideration in addition to number and height of attainments the interval separating the different lines of pursuit. To speak mathematically the degree of a man's versatility would be regarded as a function of three variables, namely, number, height and mutual distance of the several paths of attainment. It seems clear that proficiency in two or three widely removed fields of knowledge ought to be an equivalent for proficiency in a much larger number of related subjects. Thus marked ability in classics and modern languages, or in various branches of history and literature, or again in a number of the natural sciences would hardly entitle a boy to a place among the highly versatile, whereas excellence in two subjects if sufficiently far apart, as classics and natural science, would be a ground of conferring this honour. So again, in the case of original work, striking ability in widely removed fields of labour raises a man high in the scale of versatility. The thing which astonishes us in what Mr. Morley well calls "the immense and deep-lying versatility" of Diderot is the range of subject on which he threw the searching and transforming light of his mind. Similarly we rank among the finest manifestations of versatile power the combination of original scientific and artistic power as in Lionardo or in Goethe. It may be added that when this variety of power

embraces not only thought but action the degree of versatility is still higher. Julius Cæsar, at once eminent as a man of letters, a statesman, and a general, is admitted to be one of the most brilliant examples of versatile genius in the whole of history.

Looking now a little closer into the nature of the mental quality thus defined we easily see that it has much in common with what we call flexibility of mind. A versatile intellect is one that can easily bend itself in new directions. What is usually called a flexible mind is one that readily moves forward in any given line of development, that is not held back by old prejudices, but quickly accommodates itself to that transformation of ideas which progress is effecting. A versatile mind shows a like mobility in what we may call the lateral direction, that is to say, in passing from one region of ideas to another. It is pretty plain that versatility is the greater quality of the two, and may indeed be said to include the other, since the power of passing to a new domain of ideas is the supreme manifestation of the power of conceiving new ideas.

Versatility is often, by a certain looseness of thought, directly opposed to concentrativeness. More correctly it should be set in antithesis to pertinacity of mind, to the disposition of a mind to persist in old lines of activity. It may thus be said to contrast with *habit*, the force which keeps the faculties moving in the grooves traced by past activity. The relation between versatility and concentrativeness is less simple than this. It is perfectly true that many persons known as versatile manifest a decided disinclination to make any department of thought or action the object of a close and sufficiently prolonged attention. And, speaking generally, a man in whom the versatile impulse is nothing but the love of novelty in the intellectual world will, it is plain, be apt to be impatient of the delay involved in any protracted concentration of mind. But what is more correctly called versatility is the impulse to penetrate and to appropriate new tracts of intellectual territory, an impulse which doubtless includes the love of novelty but is much more than this. What gives rise to the common supposition that versatility is directly exclusive of intensity of thought is the fact that the first examples of this quality show an exceptional capability of mastering new ideas with the least amount of concentrated study. In other words the versatile mind means just the rapidly moving mind, and this rapidity of motion may quite as well be due to quickness of intellectual action in assimilating or recasting the thoughts of others, as to mental restlessness and a craving for the stimulus of novelty.

One other distinction remains to be drawn, namely between versatility and philosophic comprehensiveness. A man may

have a good deal of versatility, that is to say, readiness in assimilating the details of unlike subjects and yet not reach any large connecting views. His thought remains special and concrete, though passing over a wide area of subject. On the other hand, a large philosophic grasp of wholes does not necessarily involve a *proportionate* aptitude for mastering new details. Nevertheless the connexion between the two is a close one. The philosophic mind must have a *measure* of versatility; for the manifold parts must be separately intuited with a certain distinctness before their mutual relations are discovered. The expression 'the encyclopædic mind' seems to point to this common union of philosophic grasp of wholes and fine perception of multiform details.

It would seem then that the essential feature of a versatile mind is the capability of wide and rapid intellectual movement from one object or idea to another, and from one order of ideas to another. And now we may go a little deeper into the psychological analysis of this capability. Versatility, it need hardly be said, is no primary or elementary attribute: it is a peculiar manifestation of intellectual capability. At the same time, like all other so-called intellectual endowments, it involves something more than intellect. It is a special combination of intellect and active impulse. And since all activity corresponds to some mode of sensibility, we may conclude that versatility involves emotional peculiarities as well. We must look at versatility on each of these sides if we would understand it thoroughly.

The most conspicuous and easily distinguished feature in what we call versatility is perhaps a facility in the command of attention, a readiness to attend, and to transfer attention in any required direction. Now, complete withdrawal of attention from one subject to another implies intense concentration; and so we see that versatility includes a certain steadiness and precision of action in the organ of attention. According to the degree of the versatility will be the rapidity and ease of the movements of attention, and the area covered by these movements. Between the heavy rustic who passes with slow cumbersome step from one subject of conversation to another, and whose powers of variation soon reach their limit, to the brilliant man of culture whose intellect flies swiftly from theme to theme, and is able to fix itself on any subject which happens to present itself, there is a whole series of grades of versatile ability. To see what this mobility of attention includes is to understand the nature of versatility.

As a mode of voluntary activity, attention will vary as the forces which sustain volition. A wide command of the field of

view and great rapidity of movement will clearly presuppose abundance of active impulse flowing in the direction of the intellectual organs, those concerned in external perception and in reflection. In the case of the man who is versatile in practical matters as well, a full flow of motor activity generally will be involved. Only when there is a powerful natural disposition to observe, note, reflect in general and with respect to any subject-matter, will there be developed a considerable range and facility of action in the organ of attention.

But this is not all. As voluntary, attention implies the presence of a motive; and so a wide range of movement, a constant energetic play of the forces of attention will include a large area of intellectual *interest*. This again seems to include two things which are naturally correlative. Of these the first is a wide and varied capability of intellectual work, facility in discriminating one thing from another, in getting at the core of a new subject, in assimilating fresh material to old in spite of great superficial dissimilarity, in reaching new points of view by means of constructive power. To attend, in the full sense, is to throw the whole mind at the moment into the attitude needed for understanding and mastering; it is at once to isolate and to conjoin. Only when this process goes on smoothly and rapidly, whatever the direction happens to be, can we look for the growth of a versatile intelligence.

Let us now pass to the second thing involved in range of intellectual interest. Capability, ease of intellectual action, will clearly imply absence of effort. But the mind that takes an unfailing delight in new intellectual conquests must have something more. It must be under the stimulus of a positive motive; the pleasures attending all varieties of intellectual work must be felt keenly and desired strongly; there must be a special intensity and purity of the intellectual satisfactions. The modest intellectual gratifications of the ordinary man are bound up with special interests determined by peculiarities of natural taste, occupation, and so on. Strictly speaking, a man who is merely a chemist or a mathematician is not swayed by a pure intellectual love of knowledge: there mingles with this feeling the special liking for the subject-matter which had its origin perhaps in a peculiar native susceptibility to a certain order of impressions, or in a peculiar bent of active energy, and which is deepened by habit and association, and that disposition to regard everything customarily associated with us as a part of ourselves. In the case of the versatile man, the mere intellectual enjoyment of conceiving ideas and penetrating to the centre of an intricate subject must be a considerable quantity. Nothing short of a pure thirst for knowledge as such, and of a

real delight in the very processes of intellection, will account for that non-personal and catholic interest in ideas which distinguishes the higher orders of versatile mind—men like Diderot, Lessing and Herder.

What may be the exact physiological equivalent of the versatile capability must, I think, be a matter of vague conjecture only. We may perhaps go as far as affirm that the versatile intelligence is correlated with a fine nervous organisation, with a complete and equal development of the various regions of the higher system, both central and peripheral, and with a peculiar fulness of nervous energy and rapidity of action throughout. And in addition to this, there would seem to be presupposed close connexions between the centres of voluntary attention and all the subordinate structures involved in the reception and reproduction of impressions.

We may now pass from the nature of versatility to the practical question of its utility.

There are two ways of estimating the value of a human attribute, in relation to the welfare of its individual possessor, and in relation to the welfare of others. The worth of versatility can be judged of in each of these ways.

Looking first at its value to the individual, we will begin with the narrowest conception of utility and ask whether mere variety of gifts brings its possessor any marked practical advantage in the business of life. That some amount of general ability is a useful thing for everybody is of course fully recognised. The father who takes the narrowest and most sordid view of the blessing of mental culture will now, half grudgingly it may be, admit the utility of a varied school discipline. But such people are wont to draw the line very low down, and they would not allow that there is any obvious practical advantage flowing from a variety of high attainments.

This estimate of the utility of versatility has, it is plain, a reference to the fact that the laws of our social life assign to each of us as our principal occupation a special kind of work. Is this estimate a just one? Does the ability to do many things excellently, and to pass from one thing to another rapidly and easily, bring its possessor no distinct practical advantages?

We will here assume provisionally, for the sake of simplicity, that the versatile man will be just as efficient in any line of pursuit for which, among others, he shows qualifications as the man who manifests a predominant bent to this one kind of occupation. Any error arising from this assumption may be corrected later on.

There is no doubt that in the case of most men the minute

subdivision of employments which characterises our present stage of social development does not leave a very wide field for the manifestation of versatile talent. Yet this kind of endowment may still count as of some moderate value. In most industrial occupations, including those of the manufacturer, and the merchant, and even the agriculturist, there is some little room for variety of knowledge in the acquisition and application of which the versatile man will reap an advantage. It is to be remembered, moreover, that what is called division of labour answers rather to a tendency than to a completed process. In all occupations, the progress of knowledge and the enlargement of the market and field of competition are continually adding to the complexity of the work to be done, and the degree of complexity often becomes considerable before the employment breaks up into subdivisions. This is illustrated in the present condition of the medical profession. It follows then that varied capability will always count for something even in the most advanced state of industry. The most conspicuous practical advantage resulting from the possession of versatile ability is that of being ready to throw up an old employment and take to a new one when circumstances make it desirable. These opportunities may occur to any man. In an old and stable society, however, they tend to become less frequent. The advantage derivable from a ready and versatile mind is more plainly seen in a comparatively new country like the United States, where the rapid and unpredictable development of fresh kinds of enterprise offers brilliant prizes to the man on the spot who can readily turn his hand to anything. It may be added, however, that the opportunities for emigration which the progress of things is introducing adds to the practical value of versatility by offering substantial advantages to the man who can most readily re-adapt himself to new surroundings, new people, and a modified form of occupation.

In these ways, then, the versatile man would in the main business of life appear to have an advantage over the man of a narrow and rigid bent of mind. But we have had to recognise that this advantage is not a very great one. And it is now to be added that a strong mental appetite for a variety of ideas and activities may easily prove a positive hindrance to that steady application of mind to one line of employment which the structure and laws of society render necessary. A powerful natural disposition to launch out in various directions, a keen consciousness of manifold capabilities, is pretty certain to interfere at times with that prolonged perseverance in one definite path of action on which success in life mainly depends.

The result of this brief inquiry is that, according to the popular

conception of ability, a preternatural degree of versatile power cannot be spoken of as highly useful to its possessor. It does not pay a man in the main business of life to cultivate to a very high point the power of transmitting attention from subject to subject, or to develop fully a number of distinct mental aptitudes. And to this extent the low opinion of many-sidedness entertained by the plain practical man is justified.

There are, however, important exceptions to this general rule. In some of the learned professions a considerable measure of versatility counts as a chief condition of success. The physician and the barrister are both required to carry their minds rapidly from one case to another; and facility in getting up new cases clearly implies just those powers of rapid withdrawal of attention and reconcentration which, as we have seen, underlie versatile ability. Again, the teacher who has to understand and control the development of very different types of mind, and to superintend a number of distinct branches of study, must, if he is to be efficient, possess a certain largeness and many-sidedness of mind. In a yet larger measure, the statesman who is called to comprehend a number of unlike practical interests, together with the sciences bearing on these, will owe his efficiency to width of knowledge and to readiness in passing to new subjects.¹

The profession of literature when undertaken as a means of livelihood illustrates the practical value of versatility in an exceptional manner. There are no doubt a few writers who can earn a livelihood by confining themselves to a particular line of work, as political journalism or fiction. But such openings are not for the many. Literature is a world in which one must be ready to seize on any opening that presents itself, to vary production according to the fluctuations of demand. In periodical literature, which is now so important a section of the whole field of letters, it is pretty plain that range of intellectual vision, a power of easily mastering new ideas, and quickness in passing from subject to subject, will prove a very considerable advantage to their possessor. The successful journalist and magazine writer is almost necessarily a versatile man.

Let us now take a somewhat larger view of utility, and include all the desirable consequences flowing to a man from the possession of versatility. In general it may be said that versatility has a much higher value in relation to the functions of life as a whole than in relation to what is called one's special business. In proportion as life becomes fuller and more complex with the

¹ As a matter of history, some of the most eminent statesmen have manifested a considerable degree of versatility outside the limits of their very wide profession.

progress of human development, the worth of this mental capability will increase.

Among the relations of life which thus grow in complexity the most important are the social. And if we inquire into the conditions of social success, and of popularity in general, it is clear that we must assign a high place to the gift of comprehending various orders of ideas, of adapting the mind easily to new impressions. The man who stands in high favour with society is commonly a good talker, and the good talker is the versatile man. For ordinary purposes the versatility need not be of a very high sort as measured by the depth of knowledge required in the different subjects of discourse. In fact a part of the prejudice against versatility may be due to the superficiality of mind of many who by help of this qualification shine in the social circle. But when the society is of the very best a high degree of versatility will give its possessor a substantial advantage. And so we find that in the periods of history in which the art of conversation has been most highly cultivated, the value of versatility has been greatest. The most brilliant period of the *salon* in Paris synchronised with the reign of the encyclopædists, and as Carlyle has well said in his interesting essay on Diderot, the man who "was known as the vividest noblest talker of his time," "was long belauded as the most encyclopædical head that ever existed".

Finally we may judge the worth of versatility to its possessor by considering it as a source of immediate personal enjoyment. Looked at in this way versatility will be admitted by all to have a real and by no means inconsiderable value. If, as Mr. Spencer says, pleasure is the concomitant of adequate function, and varies as the calibre and as the state of freshness of the structures involved, then the man of varied mental capabilities and of a high degree of energy in each line of activity, will, it is plain, be able to realise a more than average sum of fresh enjoyment. The value of a versatile mind in this aspect is indeed but the value of varied culture.

We said that the value of versatility might be estimated in relation both to the individual possessor and to others. Now if we make the ground and test of value the same in the two cases, the latter kind of value may be expected to coincide with the former. The conditions of well-being for the state are the conditions of well-being for the individual members composing it. It is a commonplace in political economy that the conditions of individual efficiency are at the same time the source of national benefit. Again it is manifest that the value of versatility as an element of social success and popularity means a

value for others besides the possessor of this quality.¹ Nevertheless we may conveniently view the two values as in a manner distinct. In inquiring into the worth of this quality to society what we have specially to consider is the area and mode of distribution of this endowment in a community. Our problem thus becomes:—To what extent is a society benefited by the presence of high average versatility, or of a limited class of highly versatile minds: and how is the problem affected by the stage of development of the society?

It is plain that a community whose individual members all possessed a high degree of natural versatility of mind would show a special facility in adapting itself to new circumstances and conditions of life. And this would constitute a real advantage more especially in the earlier and more unstable conditions of social development. A people, for example, which was frequently called on to exchange the spade for the sword, would evidently gain from the presence of a wide-spread versatility of mind. This advantage, however, would become less as social development advanced and occupations became more uniform and undisturbed.

In nearly all stages of social development the possession of a high degree of versatility by a *few* individuals must, one supposes, have been a source of benefit to the community. As soon as the several social functions became divided, and classes or castes arose, the appearance of a number of exceptional minds capable of entering into and understanding different orders of activity and interest would probably have an effect in linking together the various groups. Thus the presence in a nation of men like Cincinnatus, combining military ability with simple industrial tastes, would probably help to weld together the military and industrial interests, and so promote the solidarity and strength of the community. Such a combination of different kinds of knowledge in a few individuals would further be an advantage to a society by furnishing the conditions of efficient government and statesmanship. And this gain would certainly increase instead of decreasing as civilisation progressed.

The most important advantage flowing to society from the existence of a number of versatile minds is one which would not arise until a comparatively high stage of social development had been reached. As knowledge increases in bulk and complexity it tends, by a process analogous to the division of labour in

¹ Of course if we do not adopt the same measure of utility in the two cases there is no longer this theoretic consilience. Thus extreme subdivision of employment may be viewed as beneficial to the state, that is to say, to its material interests, and yet detrimental to individuals, that is, by unduly confining the whole pleasure of life.

material industry, to break up into separate fragments, each of which becomes the peculiar care of a band of specialists. Such a process of separation of different regions of intellectual work is of course a necessary condition (as well as result) of the higher progress of science. Yet though a benefit on the whole, it is attended by drawbacks which are becoming recognised by the most thoughtful lovers of science. These drawbacks, it is said, can only be neutralised by the formation of a field-staff, so to speak, whose special business it shall be to pass from one part of the intellectual field to another, comparing results with a view to bring all the different lines of operation into one harmonious scheme. Such services could only be achieved by men endowed with a superior measure of versatility.

We here touch on the question of the worth of versatile talent in the world of literature. We have already seen that versatility benefits the individual writer, let us now see how it benefits the public for which he writes.

The gain resulting to society from the kind of intercommunication among bands of specialists just described is a manifold one. The most conspicuous element of advantage, if not the most substantial, is that which arises from a due co-ordination and organisation of results. As we have seen, the encyclopædic co-ordinating intelligence is necessarily in a measure the versatile intelligence. Unless there were men capable of traversing different regions of research there could be no such thing as a general body of knowledge, no classification of the sciences, no doctrine of method or logic, and no philosophy.

A less obvious advantage from this occasional breaking down of the barriers between different departments of research by a few versatile minds is the improvement in the quality of a special kind of intellectual work by an infusion of extraneous activity. A foreign settler in some part of the scientific field, who has been trained in other regions of observation and reflection and is free from the hampering traditions and prejudices of a caste, will often see what the indigenous worker fails to see. As a matter of history, new light has often been thrown on some department of research by such an invasion by foreign talent. Thus Goethe, whose imagination had been mainly developed in the æsthetic contemplation of nature and in literary pursuits, was able by the force of this imagination to perceive relations of form in plants which had escaped the attention of trained botanists. And it has been urged that a man specially trained in physical science will often bring a fruitful freshness of view to the subjects of philosophy. In this way, then, different regions of research may stimulate and enrich one another's activities, and further the scientific spirit may act on, and be

reacted upon by, the literary. By this latter kind of versatile achievement, of which recent literature gives us some striking examples, the more elegant branches of literature gain in exactness of thought, while scientific exposition gains in vividness of presentation and beauty of form. So too the aims and conditions of art may be illuminated by the occasional direction of scientific minds to them; while even practical politics may be made more rational and consistent by the infusion of a little philosophically trained insight.

We are thus brought to the conclusion that versatility, including the very highest kinds, has a real utility, both for the individual possessor and also for society. And it would seem as if the whole value of this mental quality tended rather to increase than to decrease. For, though at first sight the increase of specialisation which accompanies social progress appears to leave less and less room for many-sidedness of mind, it is to be remembered that the same increasing complexity of life which necessitates this specialisation of occupation is also making severer demands on this kind of power. In the case of all of us, a larger measure of adroitness in mastering new subjects and in passing from one kind of occupation to another is a necessity continually required through the very expansion of life. Over and above this, it may be observed that there is a growing field for the highest kind of original versatile power in connecting and organising different departments of science, literature and art.

Our brief inquiry into the value of versatility of the higher kinds should help us to determine the question how far the cultivation of the endowment needs encouraging. It may be said that according to our showing versatility has only a moderate value, and that the supply of the quality may easily exceed the demand. This being so, it would be better to discourage than to encourage it.

With reference to this point it is to be borne in mind that in the very nature of the case the higher kinds of versatility must remain rare phenomena. Versatile power means manifold ability, and this, it is obvious, requires much more for its production than a special kind of ability. So far from it being likely that great versatility will become a very common possession, we have reason to suppose that it is in its nature very rigidly circumscribed by certain unknown conditions. The extreme rarity of the coexistence of other first-rate power with original ability in music may be cited as an example of these limits.

We may see in another way that this power is likely to remain something rare and distinguishing. It follows from our inquiry that the finer manifestations of this capability do not

tend to be multiplied by the action of natural selection : although in all stages of human development a moderate quantity of versatility would be an advantage to the individual and so be fixed and promoted by the action of natural selection, it does not appear that its higher degrees would in general bring so great a gain to their possessor as to be favoured in this way. The advantages occasionally arising from marked versatile talent would hardly have any effect in singling out its possessor for survival in the struggle. In other words, the action of natural selection would probably tend to keep up a moderate amount of innate versatile ability corresponding to the average variety of activity necessitated by the conditions of life, but would have little if any effect in furthering the higher developments of this endowment.

Again it is pretty plain that the utility of versatility to society would not result in a wide promotion of this kind of mental power by means of the process of natural selection. In the early stages of social development, when people would be often called on to take up new habits of life, a measure of versatility would clearly give a community an advantage in the struggle of communities, and so be further developed.¹ But this process would not be carried very far, since as civilisation advanced such transitions from one mode of life to another would become less frequent. With respect to the gain accruing to society from the presence of a few organising and co-ordinating minds, we may conjecture that the maintenance of such a band might be assisted by the action of natural selection. That is to say, those communities would be favoured in which the requisite amount of versatile talent was found. And since the development of this exceptional talent would probably have as one of its conditions the existence of a certain average degree of this quality, one may argue that to this extent the spread of versatility would be promoted by survival of the fittest. At the same time it is plain that, since the requisite number of markedly versatile minds is a very small one, this process of natural selection would apparently have no effect in making the higher developments of the power less rare.

Versatility even of the highest kinds is no doubt promoted to some extent by one kind of natural process. By the direct action of heredity it must sometimes happen that a child will be born with a plurality of natural endowments representing the special attainments of different individuals or series of in-

¹ It is probable that such re-adaptation to new conditions of social existence has been effected much more, indirectly, by means of a high degree of individual variability and a natural selection of individuals than, directly, by a selection of versatile communities.

dividuals in his divergent lines of ancestry. And this cause of innate versatility is one that will probably operate more conspicuously as human evolution advances, and consequently the chances of having a number of distinguished persons among one's progenitors increase. What the exact effect of such a principle of direct transmission would be, is a question which may well be left with ingenious workers like Mr. Galton. But even if we allow that this is a cause of versatility which is destined to operate more widely in the future, it is not probable that it will suffice to make the higher manifestations of versatility a common or even a frequent occurrence. The uncertain and apparently capricious action of the principle of inheritance with respect to single intellectual qualities offers us no room to anticipate a frequent coincidence of transmissions of distinct abilities.

It may then, I think, be pretty safely said that versatility is not a thing which at present needs discouraging, at least in our country. It might very possibly be better if we had a little more admiration for it when it happens to appear among us. It may be conceded that it is easy to make versatility the object of a foolish admiration, as something splendid and imposing; it may even be allowed that the prolonged and fruitful concentration of mind of a Newton or a Gibbon calls for more of the sentiment of moral respect than the brilliant excursions into many regions of a Diderot or a Herder. Yet, admitting all this one may contend that there is a danger, with a practical people accustomed to look at the worth of things somewhat narrowly, of not giving to a power like that of versatility its due meed of esteem.

With reference to the educational side of the subject, which may be said to touch the very first principles of the science as well as the practical details of school management, a word or two must suffice here. Our line of reflection goes to show that varied capability, and the power of throwing the mind easily into new subjects, should in every case be cultivated up to a certain point. And this, indeed, is a proposition the truth of which must be plain to everybody. The debateable question is how far school discipline should aim at the higher developments of versatile power when these conflict with the maximum progress in certain definite directions.

The practical solution of the question may be found in the fact that nature here adapts things pretty closely to the requirements of the social organism. The number of boys who show no marked preference, both as to ability and taste, for certain subjects of study, and who are as easily at home in one as in the other, is after all a very small one. Where this variety of

capability is accompanied, as it often is, by a strong natural dislike to a limited range of study, the youth might appropriately be subjected to a special regimen fitted to develop and strengthen the versatile power, always provided that this is not carried to the point of altogether discouraging habits of concentration. These would become in this way qualified for the posts in life where rapidity of insight, change in point of view, and variety of knowledge are of chief consequence. When varied ability is not accompanied by a rooted distaste for persistent direction of mind to one subject or group of subjects, the problem becomes more difficult; for in this case the teacher has to balance between two possibilities, distinction in some definite field of activity and a respectable position in a number of fields.

For the average boy, who would represent the average citizen with his fixed line of occupation, it would clearly seem false economy to endeavour to cultivate versatile power beyond a certain point. After that measure of multiform attainment has been reached, which is essential to a bare participation in the gains of culture, it should be the object of the teacher to discover the special individual aptitudes with a view to exercise and develop these to their highest possible point, care being taken throughout that the cultivation of the versatile habit of mind is not wholly neglected.

Our school and college systems, including the whole apparatus of examinations, appear to have been adapted to two classes of learner—the clever specialist and what I may call the dull indifferentist. Eminence in a narrow region of knowledge, and a comparatively humble position in a wide and diversified region, seem to have been the two goals pursued. When a man with special versatile power has gone in for Double Honours it has generally been at his own risk, and with no encouragement from tutors. This state of things is in a measure natural and just, since it is undoubtedly true as a general rule that lofty attainments in any subject presuppose a narrow circumscription of the field. Nevertheless, it is well worth inquiring whether more elasticity might not be introduced into the examination-system whereby the peculiar qualities of the versatile mind might be taken account of. Examinations like those of the Civil Service, by allowing candidates to determine the area of their studies, and by rewarding multiform distinction, do, no doubt, tend to promote the cultivation of intellectual many-sidedness. What is wanted besides is a mode of testing the range of general and extra-scientific information, and readiness of mind to master new subjects and to take up new points of view. Perhaps the art of Examination may some day prove itself equal to dealing with the subject.

JAMES SULLY.

IV.—CAUSATION AND ITS ORGANIC CONDITIONS.

III.

SCIENTIFIC analysis teaches us that the externally compelled portion of our mental presence consists immediately only of sensorial elements specifically aroused. The objectifying and further complemental amplification of these specific sensorial signals result from an activity operating within our own self, an activity by which their respective significations are discriminated and recognised through the more or less complete mental reinstatement of their usual bearings upon our individuality.

We may roughly picture this process in the likeness of the widening vortex, formed by the outflow of a fluid through a narrow opening of a vessel, involving ultimately in its commotion the entire superincumbent mass of contents.¹ The local sensory disturbance or sensorial awakening is similarly followed by a more or less extensive stirring up of the mental repose, by a spreading actuation within the resting contents of potential mind.

The special group of mental reinstatements, representing as so-called ideas or images further sensorial potentialities directly connected with actually experienced sensations, constitutes our percepts. A percept is adjudged real and correct when its ideal complement of feeling can be positively realised by placing ourselves in proper situations actually to receive the suggested feelings as veritable sensorial impressions.

Now it happens generally and very naturally that in perception the intrinsic process of reinstatement is lost sight of. Not the specifically stimulating influence that arouses the actual sensorial sign, nor the sensorial sign itself, but the whole perceptual result externalised is taken as cause of its own representation within the mental presence. Thus the entire perceptually objectified thing is hypostatised as the efficient agent which is affecting our sensibility, which in fact is forcing itself upon our attention.

¹ This figure applies with almost literal truth to the organic process underlying perception. The functional tapping of the sensory inlets by specific stimulation actually creates a centrally widening vortex of functional commotion, involving more or less of the synthetical substance (see MIND No. XVII.). But the loss by outflow through functional disintegration is promptly made good by reintegration, and this is exactly the specific prerogative of vitality.

The constraining force of this illusion is to be found in the circumstance that there actually subsists a connaturally pre-established harmony or correspondence between the ideal feelings forming part of a percept and the external energies or causes thereby suggested. The direct external causes which would give full actuality to the now merely ideally aroused perceptual complement lie, in truth, ready to exert their stimulating efficiencies in combination with the special sensory stimulus by which the percept has in fact been awakened. The suggested feelings are by dint of pre-arrangement premonitory of actual feelings.

Through this perceptual illusion, which projects internally awakened feelings as actualities of external causes that in truth are only potentially subsisting, everything that has its existence between the hypostatically complemented object and its mental representation remains more or less neglected. In accordance with this attitude we believe that we are perceiving exactly, or at least figuratively, what is outside of us. We are then Realists of various shades, according to the amount of modifying power which we are willing to attribute to the organic medium whereby the external thing effects its impression on the mind. Practically we are all Realists of the purest grain, overlooking habitually the entire combination of realising contrivances, and only attending to the thing or event that we are finally perceiving, as if this were entirely a foreign existence outside of us.

If through philosophical reflection we have, on the contrary, become Idealists, we cannot of course allow ourselves to transcend the sphere of mind. Finding the perfected object mentally given, we seek to account for it by constructing it out of mental elements, or by detaching it from an all-comprising mental totality. We do not admit extramental causes or contrivances at all.

The thorough Realist assumes nothing essentially qualifying between the object and its mental mirror. The thorough Idealist grants nothing beyond variously clustered or syncretised mental states, or beyond a complex mental constitution, of which the object is thought to form a part or to inhere as affection.

We, in conformity with the results of our previous research, have—unlike the Idealist—to look for all causation of mental states outside the mental presence, which to us means outside mind altogether. Unlike the Realist, we can admit as positively known only effects within the mental presence, not their external causes. These we only infer.

Our task will then simply be to find the proper attitude towards the effect-compelling forces. For through the interpreta-

tion of the effects we desire to become aware of the full range and peculiar disposition of the causative agents. This is undeniably what we always endeavour to do when we wish to explore what we are compelled to take for external. We assume the receptive mood, and place our sensory inlets in tentative relation with the surmised foreign powers. We then judge of the nature of these powers solely by the manner in which they are capable of affecting us, *i.e.*, of arousing mental states. Henceforth those powers are for us nothing more nor less than their ascertained range of specific influence upon our sensibilities.

Now it is clear that, just as the living individual naturally behaves in order to gain an accurate knowledge of the causes effecting his perceptions, so have we here designedly to behave in order to gain a full knowledge of the complex causes effecting the mental presence. We have to undertake the office of a general and impartial reagent, opening our sensibilities just as well to the impressions caused by the organic individual itself as to the impressions caused by its environment. We have to take in, under one and the same manifesting aspect, the entire combination of conditions here co-operating. In this manner the organic individual and its vital properties on the one side, and the non-vital things and occurrences surrounding it on the other side, can all be tested by one common standard. Their differences and their agreements may in this way be faithfully recorded in the sensitive medium which they are both affecting under the same conditions. Disinterested reason, sitting in judgment on the constitution and mutual relation of these uniformly viewed appearances, will perhaps, when thus impartially informed, prove competent to arrive at some valuable conclusions regarding their peculiar mode of interaction and their respective participation in the production of the mental presence.

From this point of view, which is the point of view of true science, it becomes first of all certain that the organism and its environment belong to one and the same order of nature. They affect the sensitive and observing reagent in an essentially similar manner. The differences perceived are evidently due, not to an incommensurable disparity of being, but to a varied disposition of their fundamental points of agreement. It is furthermore readily recognised that external influences, which evince themselves to the sensibility of the observer as actually perceived or legitimately imagined motions of certain actually perceived or legitimately imagined substrata, are capable of affecting the living substance as stimuli. By some inscrutable efficiency their motions seem to awaken through impact motions in the living substance. But the motions thus induced in the living substance are found to differ totally from the motions

displayed by the stimulating agents. The motions of the stimulating agents are neither translated nor transfigured into the motions of the vital substance; nor do the motor energies of such agents combine in any way with energies inherent in the living substance. Outside powers simply effect a chemical rupture in the organic material, shattering its constitution in a specific way at the points of contact. Thus far, and no farther, does the direct influence of stimuli extend.

From this plain fact, biologically proved beyond suspicion, much may be learned. Many an elaborate philosophical scheme, dispossessed thereby of its fundamental assumption, crumbles to pieces. We may rest assured that there is here no passage open through which outside powers can in any manner and shape make their entry into the living substance. What is outside remains outside for good, so far as stimulation and irritability are concerned. There is here no blending of the objective and subjective, no coalescence of external and internal components, resulting in a subject-object presentation of influences. Whatever happens inside the organism, in consequence of the stimulating clash, is due to nothing but the indwelling endowments of the living substance itself. We can therefore finally dispose of the doctrine, which assumes that outside and inside influences combine like chemical agents, the things perceived being the outcome of this mystic union. Most unmistakeably the external and the internal conditions do not here coalesce, are not compounded into an effect, which represents these conditions unified. The dynamical stimuli are to the organism only excitants arousing its own specific energies. The entire vital effect is an internal response, in which the stimulus does in no way itself participate.

Accordingly, we have also to reject the very prevalent theory that outside things are reproduced inside the organism in a transfigured state. However accurate the correspondence of the living order to the stimulating order, there can result therefrom no such product as that assumed in "Transfigured Realism".¹ The properties of external existences are not in the remotest degree reproduced in the organic medium through stimulation. They can in no way impress themselves in transfigured projection. There obtains no representative relation whatever between the affecting influences and the aroused affections of

¹ Mr. Herbert Spencer, who uses the above misleading term, is himself fully aware of the incommensurability of the stimulating powers and their effects within mind. But it is an unfortunate name, and a still more unfortunate illustration, by which he endeavours to make clear the actual correspondence obtaining between the world outside the organism and its sensorial revelation within the organism.

the living substance. The stimuli in their direct effects are, on the contrary, hostile, destructive. They disintegrate the functioning material. It is only the slowly acquired power of effective resistance which enables life to confront and adequately to reflect, *i.e.*, to ward off outside infringement. It is the perfect play of subtly attuned vital reaction against most specific dynamical encroachment which renders the internal commotion consonant with the external motion. Whatever becomes inwardly revealed, as result of this awakening contest, is most certainly vitality's own specific creation.

The sensitive surface presents a solid front to the impinging powers not admitting their interpenetration. Its adequate resistance is due to its high-wrought restitutive energies. Thus in full-tuned accord its restitutive beats resist the disintegrating dynamic beats, and it is in this synchronous activity, in this subtly responsive vital quivering, that lies the secret of its sensitive impressibility; but not the secret of its sensorial sensibility. The inward qualitative ring of the awakening touches is altogether dependent on pre-established molecular constitution.

The kinship of nature, so obviously obtaining between the organism and outside existences, does certainly not originate at the sensitive surface. The external powers of nature are, on the contrary, effectively repelled at the sensitive front. Where kinship obtains, it has been established by connatural evolution. Physical conditions and chemical elaboration have led, on the one hand, up to various definite modes of being outside the organism; on the other hand, up to the organic tissue in which sensibility is inherent. In proportion as the developmental conditions of the outside things have been like those of the feeling organism itself will there be found kinship of nature between them. And just in proportion as the outside things have contributed to the development of the organism will there be found adaptation of the organism to their affecting influences.

The observer has both orders before him, the vital things and the non-vital things. The vital things coming under the play of energies emanating from the non-vital things are affected thereby; specifically affected by the sundry specific energies surrounding them. These direct and specific affections, to which in the course of development the organism has become attuned, have acquired for it the significance of definite signs, by which its entire range of relationship to the signalised external existences is more or less vividly awakened. But, and this is a very essential point, the relational feelings roused by the specific sign may have their seat and fulfilment not at all at the sensitive surface, or anywhere within the region of perceptual re-

alisation, but somewhere entirely outside its domain. A most striking and urgent instance of the kind is given in the powerful and definite relational feeling, which binds the organism to its restitutive material. This evidently is of entodermic origin, and its realisation or gratification is essentially an entodermic process. The kinship with this peculiar outside existent, which actually gives significance to the sign coming from the sensitive surface, lies unmistakeably in the pre-established molecular constitution of the two related existences, the organism and its food. It does not rest in the perceptual effect of the food through the sensory inlets of the organism.

It is each time the deeply rooted play of our own nature that is set going by the definite but superficial influences of other existences. And however much this internal play may be significant, either of actually occurring inner affections within other existences, or merely of outer potentialities of the same; the matter-of-fact coincidence of what we ourselves experience, with what is actually contained in the thing observed, is exclusively due to pre-established similarity or correspondence of constitution in the realising subject and the foreign existence influencing it.

You who are now appearing within my field of vision are my percept, exteriorised by an automatic reference to the compelling powers that in reality constitute your existence. I understand the significance of your smile solely by dint of the congruity obtaining between my being and yours; a congruity brought about by connaturalness of evolution.

The sight of this flame suggests its heat, *i.e.*, its influence on my organ of sight awakens, along with visual perceptions, also the idea of heat connected with it. I am then further capable of realising as matter-of-fact this ideally suggested heat, so that it shall become an actual sensorial affection. But this is accomplished solely by dint of a pre-established correspondence between my own nature and the nature of that which constitutes a flame as a thing-in-itself.

The links binding the ideas, suggestively awakened by actual sensorial signs to the hidden potential virtues inhering in foreign existences, have been organically elaborated. They rest as acquired constitutional or structural properties in the realising subject.

The justification of this interpretation, given by the Philosophy of Organisation, must be found, first, in the organic facts actually obtaining, and then in its efficiency to explain the configurations and processes of nature as a whole. It is my endeavour to prove that the same entity which appears to us as a human organism experiences also, as an affection of its own,

the mental presence. It would almost seem as if to unsophisticated minds this proposition must appear well-nigh self-evident. Yet what a drift of revolutionary consequences is involved in its admission. To become competent to judge of such a position, philosophers must not shrink from the task of mastering the general facts of organisation. It might readily be shown that transcendental and experiential philosophies have always been, in truth, little else than a more or less correct conceptual or perceptual rendering of organic occurrences. But these occurrences were recognised only in their immediate mental effects within the region of highest organic elaboration; and thus was overlooked the entire combination of causes co-operating in the production of this highest organic region, and therewith also of its immediate effect, the mental presence.

In consideration of this import of organisation we will not refrain from casting an evolutional glance at the relation of the organism to its environment.

Though the influences of the environment induce all developmental changes in the living substance, yet they bring about the progressive elaboration in a very indirect way. Their immediate operation is merely to shatter in specific fashion the chemically cumulating surface of the organism. Nevertheless, it is through this functional clash of the organism and its surroundings that the vital knot with all its wondrous perplexities is tied. As regards the foreign powers, which are inferred as emitting the influences, it is rightly conjectured that their exertions in relation to the organism are purely dynamical. They act by mechanical impact, by definite dynamical beats on the surface of the living substance, disintegrating the same. In consequence, the living substance restitutes itself by force of its own intrinsic affinities, appropriating the necessary complemental material. But it does more than this. The many incident forces impinging on its surface succeed in effecting a slight resultant change in the entire combination of the chemical radical, which remains after functional disintegration. The living substance, after a second functional disturbance, is not exactly identical with the same living substance after its first functional disturbance. The disintegrating forces effect a more and more unitary rearrangement: less complete chemical disruption, more chemical commotion and readjustment. In consequence, the following saturation or restitution accomplishes the production of a higher chemical unit, of a living substance more highly elaborated.

This structural development evinces itself, on the one hand, in a greater degree of resistance to the disintegrating influences by means of more rapid restitution; on the other hand, in a more unitary co-operation of all the vital processes occurring

within the living substance. It is always an internal commotion of the living substance that is effected by the foreign influences. But this internal commotion is incited by means of specific disintegration. The specific disintegration caused by the foreign powers is followed by a specific reintegration due to the intrinsic constitution of the living substance itself.

The lower the living substance in the scale of evolution the more thoroughly do the disintegrating powers overthrow its constitutional or chemical equilibrium. The lowest organisms cannot even attain a stable or equilibrated surface. When at a higher stage of development the living substance is becoming so far elaborated as to maintain against the impinging forces the stability of its surface through prompt repair, then the internal commotion caused by the surface-disturbance is also becoming more and more regulated. At last, the surface-disturbances are found specifically attuned to the special kinds of disintegrating influences. The chemical surface-vibrations of the living substance are now synchronous with the dynamical medium-vibrations, and constitute therefore adequate signs or responses, followed by no more internal commotion than their restricted range of activity directly compels. Through more and more definite restriction and developmental specification of the general commotion of the living substance, the perceptual world is gradually wrought with growing distinctness within its sensorial susceptibility. The general sensitiveness of the vital unit becomes thus significantly determinate through the organisation of a system of specific and localised sensory relations, which sensory relations on stimulation furnish to the mental presence sensorial signs denoting the existence of specific external powers. In the highest organisms the entire surface is found variously and delicately attuned by means of specialised relational elements to the influencing powers all around.

The sensorial sign denotes the external existence, because it has been gradually elaborated by the action of that specific foreign influence up to the point of synchronous restitution, whereby in adequate response it resists the disintegrating beats. The sensory resistance, or counterbalancing of disintegration through restitution, gives to the compulsion the character of a specific and fixed functional commotion. It contains also the germ or "impression" of our idea of power so vainly sought for by Hume, and, in my opinion, so wrongly placed by many philosophers and scientists in a feeling believed to accompany the innervation of voluntary muscles. The compelling power is felt only because it is resisted, and it is felt not only in consequence of resistance experienced by muscles, but also in consequence of resistance exerted by sensory organs.

The principal truth, however, which I am endeavouring to render quite clear is, that during the evolutionary process there is no putting-together of pre-existing elements of any kind, neither of a mere sensory nor of a reflex nature. Whatever appears separate and elemental in the organic individual, and here more especially in its ectoderm, has been gradually specialised within a single living unit; has been rendered heterogeneous and concrete by the establishment of more and more specialised organic relations to specific outside influences. All these multitudinous relations are cosmical riches accruing to the one indivisible individual, complicating its organisation and contributing to the resources of its mental microcosm. Thus, at the sensory surface, the objective world makes its symbolical entry into the living substance. With specialised sensorial affections it builds up its objectified appearances, supplying the organic individual with all its wealth of knowledge. It is centripetally that our unitary being receives its discriminable and specialised affections, and on its system of organised surface-relations is dependent the development of its entire nature down to its innermost core. Through organic elaboration, starting at its points of contact with other existences, the living substance is gradually impregnated with meaning, with definite references to surrounding powers, and its consonant constitution reveals at the remotest suggestion a wide and varied expanse of such organised relations. These relations, now firmly and definitely pre-established, have been all centripetally wrought by slow degrees of specific elaboration, have with progressive subtlety and distinctiveness been welded into the unitary structure of the living substance by the persistent operation of specific outside influences.

I dwell thus emphatically and repeatedly on the structural elaboration of the living substance through peripheral influences, because once adequately recognised it renders certain the direction of the creative influx, and rescues us from the tyranny of sterile doctrines. Take, for instance, even Critical Idealism, whose aim it is to be a conciliatory form of Transcendentalism, keeping resolutely in view the import of the sense-derived material of thought. It is clear that under its assumption of a pure, intelligible Ego, irradiating all synthetical powers, progress of any kind—if at all attainable—can make its way into our world only through the same entry as the energy, on whose activity the entire value of experience is made to depend. We should then have to look for any accession to our mental capacities, not to the fructifying intercourse with the sensible world, but to the transcendent source that sustains the intelligible Ego, through whose energising influence our mind is supposed to derive all its phenomenal efficiency. If I am *a priori*

in possession of certain powers, which transfigure a meaningless medley of material into a full-fashioned universe; if it is I who impose shape and order upon nature, accomplishing this by dint of spontaneous faculties supernaturally derived; then it is certain I have to look for guidance in life only to inward inspiration.

This being undeniably so, can any serious thinker believe that it will make no difference in the fate of humanity, whether its leading minds are directed by the one or the other, by the centrifugal or the centripetal attitude towards the life-giving source? It is, therefore, above all incumbent on us to seek a firm basis for a sound theory of practice, for the systematic organisation of progress.

Exulting in the harmonised and unified wealth of our ideal world, we have nevertheless to recognise that it is an experiential and not a transcendental gift; not a gift accruing directly to mind as such, but accruing to it indirectly through organising influences.

It will very likely be pertinently remarked that the view here taken is itself transcendental and dogmatic in the highest degree. We have conceded that nothing but mental states are really given, and, notwithstanding, a whole universe of external powers is not only hypothetically conjectured, but its existence confidently postulated, and pressed into active service as the efficient source of the very mental states, from which it was a mere inference. This, certainly, seems to be not only a vicious circle, but one whose larger half is moreover formed by a pure fiction. It is well worth while earnestly to ponder over these specious objections, for they take us to the very heart of the question. I have sufficiently shown that what we really understand by a mental state is to be found only within the mental presence. The mental presence alone is actual mind. All the rest is merely potential mind. This is a fact so obvious that when once realised it can nevermore be overlooked. It necessarily involves transcendentalism and dogmatism in all philosophy. For the task is to explain the nature of the vast system of hidden potentialities, the partial and actual manifestation of which, at the time being, constitutes the mental presence. Where then are all the multifarious possessions of mind not just now consciously present? This is a supreme question, the answer to which cannot in any way be evaded. Let philosophers candidly ask themselves: Is it fairly answered by conceptually amplifying the mental presence so as to make it contain a full assortment of mere abstract signs for all mental potentialities? This, however, is exactly the account that is rendered by so many thinkers of the stupendous confluence of transcendent

powers that upholds our universe. Some, indeed, try to imagine a mental presence containing within its one conscious moment the actuality of all our mental potentialities. But this is to postulate an altogether inconceivable and incongruous entity. For our mental nature forms an enduring unit only by dint of its potential implications. Start going its potentialities, and in dense crowds the perishing manifold will hurry by; keep on with sufficient incitement, and in wild delirium the whole unitary system will dissolve into a dizzy maze of crumbling thoughts and flitting phantoms.

All the explanations of mental potentialities keeping exclusively within the sphere of mind, and resting on the desire to assimilate the hidden powers with that which appears to us most exalted, are clearly subjective fictions, having nothing outside to sustain them. The Philosophy of Organisation, on the contrary, wishing for the present to account for nothing more exalted than just our own mental potentialities, offers as explanation of them an infinitely more verifiable background of power. It does not fancifully construct an inconceivable state of existence endowing it *ad libitum*; but shows how that, which with minute distinctness is in all verity perceptually revealed to us, must, by dint of its disclosed properties, be itself the unitary being, incorporating all the wealth of potential mind. Truth has to be unswervingly followed, wherever it may lead. Surely its guidance alone can take our thought to the fountain head, whence our being mysteriously flows; to the depth of power, from which it primordially arose, and on which it now trustingly reposes, from moment to moment transcendently sustained. In this sense the Philosophy of Organisation is uncompromisingly transcendental. Kant called his system Transcendental Idealism, placing the powers and their efficient operations within the mental sphere. He gave in contradistinction the name of Transcendental Realism to that philosophical system which hypostatizes things-in-themselves as efficient causes of things in perception. The view of reality here explained may be likewise called Transcendental Realism; but with the understanding that under the causative things-in-themselves are to be reckoned nothing actually mental, but only all inferred powers, as far as they are capable of affecting the organic individual, together with all such inferred powers as constitute the organism itself.

The whole question here involved lies really in a nutshell. Kant, having chiefly the mental states as such in view, neglected the entire neural organisation lying between the skin and those parts of the central nerve-substance, which furnish to the mental presence the conceptual order. He offers to the outside powers impressible sensibility and also pure inactive

time and space, in which somehow the sense-material falls into perceptual order, so as to form appearances. Then he sets in motion his only sphere of activity, the conceptual powers, by which the passive raw-material of perception is conceptually assimilated. Instead of tracing the vital activity unifying and transforming sense-material along the entire neural organisation from periphery to centre, he reaches out from the most exalted region of the mental presence itself, and attempts at once to snatch up into it the crude products of sensory function.

We, on the contrary, do not lose sight of the organisation under the skin. Granting likewise¹ that we receive sensory impulses from outside, we endeavour *organically* to account for the marvellously varied and systematised synthesis of sense-material found accomplished within the mental presence.

The chief difficulties in the way of a common understanding are, it would seem, first the evident but mysterious subsistence somewhere of all mental potentiality as a unitary system, and secondly the unmistakeable but unexplained spontaneity, identity, and ideal self-sufficiency of the centrifugal current of personality.

The Philosophy of Organisation answers, as we have seen, the

¹To silence those who wish to make it appear that Kant reached the sphere of things-in-themselves only within mind by means of mental synthesis, complementing all mental implication by the so-called Ideas of pure reason, I will quote two passages.

Eberhard had maintained: "We may choose as we please, we arrive at things-in-themselves." Kant replies: "This exactly is the constant burden of the *Critique*." "It says the things, as things-in-themselves, give the material to empirical intuitions (they contain the ground that determines the perceptual faculty according to its sensibility), but they are not themselves the material of the same." *Werke*, Vol. I., p. 436, Ed. Rosenk.

"Is it possible to believe that Leibnitz understood under pre-established harmony the coinciding of two beings totally independent of each other in their nature, and not to be brought into communion with each other through their own powers? That would be enunciating Idealism indeed; for why should one at all assume bodies, if it is possible to view everything that occurs in the soul as effect of its own powers, which it would exert just the same when perfectly isolated? Soul, and the entirely unknown substratum of appearances, which we call bodies, are quite different beings; but the appearances themselves as mere forms of intuition dependent on the nature of the subject's soul are only perceptions. And thus the communion between intellect and sense in the same subject, according to laws *a priori*, becomes intelligible, whilst at the same time the necessary natural dependence of these laws on external things has not to be sacrificed to Idealism." Vol. I., p. 480.

These unmistakeable sentences were written seven years after the *Prolegomena*, and nine years after the first edition of the *Critique*.

A centripetal determination is here most distinctly admitted, curtailing very essentially anything like efficient causation within the sphere of subjective ideality.

first of these problems in a general way by recognising as potential mind that which perceptually appears to us as the nervous system of an organism. It answers it more exhaustively by showing how the nervous structure can form a potential system, of which the mental presence is the actuality.

Not to feel shocked, as we are so apt to be, at the apparent tangibility and familiarity of that which we declare to be the seat and substratum of mind, we have to remember how very remotely and figuratively we, in truth, become aware of it. The entity that constitutes an observed personality merely incites in specific ways—mostly through the help of foreign media—the observer's sensibility, whereupon a pre-organised system of efficiencies produces a definite appearance within his mental presence. The observed personality when, for instance, visually perceived, contributes to this phenomenal revelation nothing but an inferred complex of awakening beats, indirectly conveyed to the observer's sensitive surface by the so-called cosmic ether. Thus the nervous system, as the seat of potential mind, is but a figuration framed in a foreign mind; framed there autonomously through the agency of a foreign organisation, incited by a foreign medium. It is into this far-off depth of hidden being that recedes the veritable complex of energies, which we so confidently call a nervous system. Nevertheless we trust, and securely trust the perceptual revelation as a symbolical representation most reliable to count upon. Surely what is here so distinctly disclosed to us will give us no deceptive hints regarding the true nature of potential mind.

With regard to the compounding of mental constituents, it has been the custom hitherto to explain it, organically, by assuming a mere synergistic chiming of relational elements. A definite set of such elements—nerve-fibres and nerve-cells—functionally incited were believed to produce, by a momentary combination of their so actuated energies, all complex mental states which we experience. In MIND XVII., I have at length shown how utterly impossible it is that a number of elementary beings should concentually, by the blending of their various internal commotions, produce any kind of joint or compound effect. Nervous structure can transmit a sensorial effect only through reproduction of the effect within its own substance. A functional beat at the end of a nerve-fibre has the same sensorial value as the initial beat, only because the functioning substance at both places happens to be identical. If a number of diversely functioning nerve-fibres are found to converge centrally towards a common focus, where they terminate as separate elements, then a compound effect of their elementary energies can only be realised through an inherent

efficiency of the central substance, which they conjointly incite. The compound effect is the response of a synthetic substance, which has become attuned to the complex stimulation; and this response follows solely by dint of the powers inherent in that substance. The central substance, in which all sensory elements terminate, and in which all so-called motor elements originate, is indeed a veritable synthetic substratum with cumulative stages of comprising and representative value. It constitutes sensorially the more and more unified and epitomised effect of all incoming relational elements. So much is this the case that even the higher seated sensory organs are already in themselves structures unifying and epitomising the effects of lower sensory organs. An example of this, strikingly obvious, is given in the relation of sight to touch. For sight may be interpreted as virtual touch; touch sublimated into a widely comprehensive and subtly suggestive system of intellectualised tactile representations.

Thus the entire organic elaboration of the individual culminates in the production of its mental presence, in which the whole complex of aroused affections is found condensed into one moment of conscious realisation. In this way, peripherally incited signs, for instance, have compelling power first to reinstate through stimulative irradiation their perceptual complement, and then to reinstate also though less coercively through central representation and re-representation all their many ideally suggested responses.

Of course it is only in merest outline that we can, at present, infer what actually happens during the process of sensorial concentration, which gives rise to the peripheral influx into the mental presence. The special central arrangements are too little known as yet. But it would seem as if the time were not far distant when we shall be able accurately to fill in this general outline. Meanwhile we can with great certainty conclude as much as is here indicated. For it is obvious that all neural arrangements go to form the microcosmic focus, which we have called the mental presence. All collocations and properties of the nervous tissue are therefore to be viewed as the potentiality of the ever-resuscitated moment of conscious realisation.

One still more recondite central problem remains to be examined. What constitutes the spontaneous, identical, self-sufficient current of personality?

We are irrefragably aware that our mental states are not all compelled by energies foreign to ourselves; that from the depths of our innermost being there goes out a fulness of power to meet the inrushing throng of impressions, and to dispose of them according to ways of our own; that it is ourselves who

possess the key to the order of the phenomenal universe, referring each casual occurrence to its proper place in the vast and unitary system of things found registered in the records of our memory, nay, found imperishably ingrained in the intricacies of the vital structure, where through endless toil it has become securely and livingly organised.

Indeed, compared with the accumulated result of experience, of which our entire frame with all its vitality constitutes the condensed expression, the sundry happenings of individual life are like random whiffs of wind sounding the chords of a mighty instrument, which with its own massive swell is ever reverberating the grand harmonised sense of ever-speeding nature.

This universal sense constitutes super-individual Truth through the common inheritance of generical acquisitions, and is rendered more and more available and definite through special synthetical representations within the central substance and thereby within the mental presence. It is this capitalised unity of import that we discriminatively and testingly oppose to the particular incitements of daily life, that we moreover constructively impose on the raw material of nature. It is this organised and organising fund of cumulative power that

“Sweeps through the dull, dense world, compelling there
All new successions to the forms they wear,
Torturing th’ unwilling dross that checks its flight
To its own likeness, as each mass may bear;
And bursting in its beauty and its might
From trees and beasts and men into the Heavens’ light.”

In various ways I have laboured to show that the fundamental occurrence and culminating point of life is not its functional manifestation; that, for instance, contraction is not the fundamental occurrence and culminating point of muscular vitality, but rather a retrograde event.¹ It is by dint of intrinsic and spontaneous energies that muscular substance expands, gathering thereby through chemical cumulation the force which it afterwards expends in contraction. Here, where we can visibly follow the entire process, we gain an unmistakeable insight into the centrifugal or creative current. It is this same intrinsically propelled current, which on every occasion maintains the identity of the living substance, restituting it after functional disintegration, and repairing its integrity after deeper mutilations. It is this regenerative current also that effects the developmental growth of the organism that brings with it all the accumulated and unified wealth of our being, preserving it intact against the shattering influences of the outside world. It is this self-

¹ See a paper by the present writer in Pflüger's *Archiv* XXV., “Zur Lehre von der Muskelcontraction.”

evolving current of life, which is persistingly upholding our being. In its unflagging perseverance our personality, with all its spontaneous activities, safely abides.

It must be remembered that nerve-substance is really only a very much higher elaboration of contractile substance. Its response to impinging forces has become an adequately attuned resistance. This is no longer the manifest yielding, with which contractile substance answers to stimulation. But, essentially, the process remains nevertheless the same. The foreign influences shatter the living substance, causing a more or less profound chemical rupture. A small, split-off fragment goes to form the excretions of the body. The main remaining portion of the living structure contracts if it is muscular substance. Here the contraction is the salient, and, as far as we know, the only organically efficient function. This contraction is seen by an observer as a more or less extensive mass-motion of the functioning substance. But besides this mass-motion, and corresponding to what is perceived as molecular commotion, the muscle may possibly experience in itself some dim feeling of its activity, may propagate towards the central substance elements of consciousness. At all events, it is that which is perceptually realised by an observer as mere molecular commotion that constitutes in nerve-substance the only organically efficient function. According to many positive indications this perceivable molecular or chemical stir of nerve-substance is accompanied by a peculiar inward experience, realised by the functioning substance itself. This experience we call feeling.

A feeling is an exclusively subjective incident, qualitatively incommensurable with anything inferred in the outside powers, which we assume as its excitants, or as its substratum. It is wholly the product of organic elaboration and activity, whatever this may be in itself. The world figured in feeling is therefore an organic creation. The initial sensorial responses, as well as their synthetical values realised in the central substance, are altogether incalculable revelations, manifesting a unitary life-world marvellously self-efficient with regard to the environing powers, but wholly dependent on organic structure.

In order then to form some idea in what manner the mental presence is the product of nerve-structure, we have, above all, to realise that mind is its natural and vital affection, that it is the functional actuality of its potential energies. The activity of what we perceive as nerve-centres forms the mental presence. We perceive the mind-emitting substratum and its activity as nerve-substance in molecular commotion, because it possesses also the power of thus specifically stimulating an observer, who however remains thereby totally unparticipant of the

mental presence displayed simultaneously within the observed subject.

Having now as observers allowed both the organic individual and its affecting surroundings to record their mutual relations¹ on our impartial sensibility, we are in a position to judge which part is played by each of them in the production of the final effect, the mental presence. But it was solely by interpretation of this final effect, *i.e.*, the *observer's* own mental presence, that the characteristics of all powers and their activities, *i.e.*, of all causes and their effectuations, had to be construed. We can, therefore, readily conceive what an excessively involved problem Causation really is. Indeed we need only study the very diverse opinions held by the foremost thinkers of all historical times to become aware what a Gordian knot Causation has ever proved to philosophy.

Influences external to the organism act only as stimuli upon the same, bringing into play through peripheral excitement a pre-arranged system of deep-seated relations. This awakening process furnishes to the organic individual the centripetal contents of his mental presence, from which are inferred all external existences and activities.

The symbolical figurations of this system of organically signalised occurrences may, however, prove deceptive as regards their extrinsic bearings, chiefly because all sensorial affections may also be more or less vividly awakened through stimulation taking place inside the organism. We are beset not only by a world of externally compelled suggestions, but also by a world of suggestions of exactly the same import internally originating.

In both cases the stimulated affections are more or less assimilated or neglected by the centrifugal activities, *i.e.*, by the spontaneous current which embodies the integrating power and steadfast core of our being.

EDMUND MONTGOMERY.

(To be continued.)

¹ Not to complicate the present difficult discussion more than necessary, I have here purposely left out of sight the effects produced by the living individual on its surroundings. Of these it will be time to treat, when on some future occasion I shall have to consider "Final Causation" from an organic standpoint.

V.—CRITICAL NOTICES.

The Philosophical System of Antonio Rosmini-Serbati translated, with a Sketch of the Author's Life, Bibliography, Introduction and Notes, by THOMAS DAVIDSON. London: Kegan Paul, 1882. Pp. cxvi, 396.

This book consisting of a summary of Rosmini's philosophy written by himself, with illustrations and enlargements interpolated by Mr. Davidson, and almost entirely drawn from Rosmini's other works, is put forward as an antidote to prevailing sensationalist, subjective, and phenomenalist systems, and claims to offer, for the first time in the history of philosophy, "a consistent theory of cognition," one that may be accepted alike by metaphysicians, scientists, and ordinary folk. In a word, it purports to be, in all essential respects, the final reconciliation of philosophy and common sense.

In an historical introduction of much original interest, Mr. Davidson endeavours to show that these two have been mainly at variance from the earliest Greek times down to our own, and that hitherto philosophy has been, in its central activity, an assiduous and not altogether unsuccessful pursuit of nonsense. Rosmini comes—*fulgor ab orienti*—to redeem us from this secular vanity and vexation; and whatever subsidiary truths past philosophy has fallen in with by the way, are gathered up in him, and in his system shine with fresh lustre. It is impossible in a short space to deal with the details of this claim. They are so multifarious. But the specific charges against the past may be summed up, for purposes of valuation and criticism, thus:—(1) From Parmenides to Aquinas, philosophy confounded subject with object, identifying thought with being, and assimilating sense to sensible things and intellect to intelligible things, with the materialistic pantheism of the Arabian Aristotelians for result. (2) From Descartes downwards, it has confounded objectivity with subjectivity, providing with Descartes "subjective persuasion" only for criterion of truth, reducing with Hume subjectivism and sensism to absurdity, with Kant making Hume's reduction systematic and positive, and with Hegel ending in spiritualistic pantheism. It would be difficult to dispute the general fairness of this impeachment. Rosmini proposes his philosophical discovery as a means of avoiding this confusion either way. He thinks he has found the sole and sufficient form of cognition. This form, unlike Kant's, is not many but one, not subjective but objective, and explains that common-sense and scientific view of things, which Reid could only refer to inexplicable instinct. This form is what he calls "ideal" or "formal" being, the "idea" or "essence of being". It is the inborn permanent "intuition" or immediate "notion of being," and is always and entirely *objective*. If the principle of knowledge is really to be found on reflection amongst the facts of consciousness, if it withstands analysis and so is an ultimate self-evident ground of knowledge, and if

observation can find no other formal element, so that this form is "the only *à priori* element" of experience; then, Rosmini will have established his position and distinction amongst philosophers. Let us, therefore, see how he gets his "ideal being," for here we shall find what is central, cardinal and distinctive in his system, and by its justification he must stand or fall.

His Ideology professes to begin without assumptions. He inwardly observes, reflects, and analyses, without assuming the accuracy of his method, which Mr. Davidson compares to attentive groping about in the dark. If the daylight is eventually reached, it will give assurance of itself, whether the way can be proved legitimate or no. So Rosmini claims to have reached, by "internal observation," what shines by its own light and is indeed the light of all our seeing.

He looks for a common element of all cognitions. Narrowing his view to the simplest percepts and concepts, with which knowledge begins, he sees that any one of these can only be had by "an internal affirmation". "To know that an entity exists, and to say to myself that it exists, are one and the same thing." When one of these spontaneous affirmations is reflected on and analysed, it is an explicit judgment, which has for its predicate the idea of being. There is thus only one *à priori* synthesis, that which affirms being of feeling. The Kantian categories or primary concepts are really secondary, and resultants of this first kind of affirmation.

"When I say to myself that there exists any particular real being or entity, I should not understand my own meaning if I did not know what entity was. Therefore the *notion* of *being* or *entity* in general must be in my mind." We have this notion of being by "intuition". "To know simply what being is, I require no such *affirmation*, but another act of the mind, which I shall call *intuition*." "To intuit being is to understand it: on the contrary, we see that our feelings cannot be understood by themselves—indeed that they begin to be understood only when we regard them in relation to being, that is, as *terms* of being itself." Sense is blind. We have but this one intuition. Kant, on the other hand, says that "through the medium of sensibility objects are given to us, and it alone furnishes us with intuitions." To deny and disprove this sentence and all its implications, may be said to be the whole business of Rosmini. Sense has no objects or intuitions. There is only one intuition of one object. That sole intuited object is "ideal being," which is itself objectivity and cognisability, and through its universality (*i.e.*, indefinite applicability, for Rosmini is a nominalist and does not otherwise understand universality) is the ideality and possibility of all other things and their knowledge. If attempt is made to displace and disparage "the notion of being," by calling it an abstraction, as if it were an after-thought arising upon reflection and through a course of reasoning, Rosmini admits that it is most abstract because in itself quite indeterminate and distinct from all its terms; but contends that it is not an abstraction in the sinister sense im-

puted, because it is a necessary constituent element of the very first and least bit of concrete knowledge. Without it, we cannot know anything. We cannot say that anything *is*, without already possessing in our knowledge the notion, meaning, or essence of being. It cannot be of subjective origin, for it first gives the distinction of subjective from objective, in giving the first idea of objectivity. If it is said that it is undefinable, that is because it is an ultimate, and the prime ground of all definition. And the same may be said of feeling. It cannot be explained to him who does not feel. Being can only be known; feeling, only felt—neither of them defined. They are alike ultimates. It cannot be a modification of the thinking subject, or “a state of consciousness,” or “the feeling of ourselves,” or “ourselves modified,” because it is necessary to the most rudimentary knowledge of those; and, besides, it is given as *not* us, but over against us as purely object. It cannot arise in reflection as the abstractest and most general representation of what is present to consciousness, because reflection adds nothing, makes nothing, but only finds what is already there and brings it into clear light. To define existence as presence in (or rather *to*) consciousness, is to assume existence beforehand. *Prae(s)-ens* presupposes *Ens*. Indeed, it is to assume being twice over, because the consciousness to which being discovers itself on reflection, already itself exists. Nor is the notion of being-in-general created in the act of direct perception, for it is a necessary element or factor of that act, and logically prior to it. In every act of knowledge it has the logical primacy. It is, therefore, a native cognition.

It is the form of intelligence, because it informs or constitutes the mind. To make any sentient a mind, you need only give it an object. So it becomes *intellective* as well as sensitive principle, by “increase of act,” and will henceforth perceive all the terms of its feeling in being.

This form is *objective*. Looking at it or into it, it takes us quite off ourselves, gives us a straight outlook, and is the pure form of externality. Here, Rosmini criticises the Kantian forms of cognition, shows that, so far as they are subjective, they are material and not formal, *à posteriori* and not *à priori*, reduces them all to the one so-called modal category of possibility, and identifies that with actuality and necessity. “The idea of indeterminate being,” as such, *i.e.*, as ideal, is both actual and necessary, and contains all that is primitive, formal and objective in the seventeen forms of Kant, amongst which Rosmini includes Time and Space.

Rosmini, unfolding his Ideology which was rolled up in his first-principle, steers a middle course between sensism and idealism. There is by the way much instructive criticism of Hegel and Fichte on the one hand, and of the English school on the other. He is almost at his best as a critic. His doctrine of self-consciousness is constructed in opposition to Fichte; his theory of perception, which is, of course, ontological in a proper sane sense, in opposition to the sensist and phenomenist. His leverage in both cases comes from the inflexible objectivity of his first principle. The inviolable and unadulterate

objectivity of the object, "ideal being," is brought out most clearly in the following passage, which also defines Rosmini's use of the correlative words, "principle" or "faculty" and "term," and shows how "object" differs from "term" *per eminentiam*; being of the activity of the intellectual principle, term, and something over and above, namely object. "By *object* we understand a term seen in such a way that the seer sees neither himself nor any relation to himself." "It appears simply as being." We cannot even say it is intuited. That requires reflection. "But (on the contrary) . . . it is impossible to conceive that the felt exists, without implicitly conceiving the sentient and its act. Hence the felt is not object, but simply *term*."

The object, then, as intuited, is "separate," and requires no reflective distinction or negation to give it as object. The Ego needs not, as with Fichte and Ferrier, posit or create or know itself and the Non-Ego at the same time. Knowledge is not self-consciousness, and existence is not co-existence. Fichte fell into the fundamental error that vitiates his whole philosophy, by confounding knowledge with feeling, for feeling is always thus "double, made up of that which feels (principle), and that which is felt (term)." So, "even in the bowels of Transcendental Idealism, sensism has laid its egg". Again, when Fichte begins with the activity of thought that reflects upon itself, he has failed to observe that no reflection is an act returning upon itself, but upon another act foregoing, and consequently there must be a direct act of thought first, else reflection would regress *ad infinitum*. "No act makes us know itself. The intuition of being does not know itself." As Mr. Davidson well says, "all consciousness takes the form of judgment, and that judgment is the analysis of a synthesis formed previously in thought, but outside of consciousness". Prior to consciousness there are the intuition of being and feelings in original synthesis—the affirmation made for us by nature. "The soul affirms itself and in so doing changes itself into an Ego." We subsume self-feeling under the notion of being, and thus come to the knowledge of ourselves. This is the Rosminian genesis of the Me. In another place, he inquires how man finds himself, and gives an answer which may be summarised in this way:—(1) The act of Feeling subsumed under Being gives the sentient principle as known. (2) The act of Cognition or intuition of Being subsumed under Being gives the intelligent principle. (3) Perception, *i.e.*, synthesis of feeling and cognition, so subsumed, gives the "reasoning" unifying principle, which combines both the others in one active principle, the sensitive-intellectual principle. (4) A further reflection discovers the man to himself in the discovery that the act which discovers the reasoning activity is none other than the reasoning activity itself. *I, that say I am I, am the same I, that I say I am.* These combinations by superposition of coincident reflections, are made possible by the primitive feeling of "meity," or feeling which a man has of his own universal activity. The same activity is *felt* operating through all the reflections, and being felt, it can be

known by reference to Being. Rosmini says that this doctrine of the Me properly falls under Logic, which is the science of the art of reflection and explication.

His theory of perception resembles Reid's and Hamilton's, in as much as they are all three Natural Realists; and he uses Reid's well-known distinction between sensation and perception proper or intellectual, with hearty acknowledgment. But Reid did not see the necessity of the universal idea of being, and so his appeal to mere instinctive common sense leaves him outside of philosophy or reasoned truth, and at the same time within the fatal circle of subjective persuasion. Again, as already implied, Self-consciousness is not, as with Fichte and Ferrier, a pre-supposition of perception. These two cognitions are based on two quite different feelings—the one on a self-feeling, whose term is “proper,” the other on feelings whose terms are “foreign,” and felt as refractory and opposing elements within our feeling of self. “Ideal being” is the *form* of perception and “real being” is the *matter*. This distinction of the form and matter of knowledge is considered by Rosmini to be the only thing of permanent value produced by philosophy from Descartes to Hegel. “Ideal being,” we know. “Real being” is feeling or felt activity. Feeling can only be conceived of as activity; and, conversely, activity can only be conceived of as feeling. What is affirmed to be, is always a felt activity; and all realities are reducible to principles or terms of feeling, and these again, whilst always contra-distinguishable, are not separable, *as felt*. In other words, we cannot conceive of the felt term, as felt, apart from the feeling principle and its act of feeling. To detach the term of our feeling from our feeling of it, we must attach it to our intuition of being, and so make it an object or “thing-in-itself”. We can then perceive it in being. This is perception; and such objects or ideas formed by using feelings to determine pure being are percepts. It is the “unity of man or the simplicity of the human spirit” that compels us to bring feeling under being, and thereupon to perceive that being is one and the same as knowable and as active or felt.

But whilst we must describe the act of perception serially, we must remember that it is not a process but an immanent act, and is not voluntary but spontaneous and natural. And whilst sense is blind, we must not forget that the notion in itself, *i.e.*, taken *per impossibile* in its mere abstract indeterminateness, is empty and merely formal. It cannot be so had and held, and must not be spoken of as if it could be, or as if it were a pre-existent separate component part instead of an inseparable co-existent constituent element, or as if its logical primacy were in any way an historical priority, or as if matter and form, feeling and notion, while contradistinguishable, could ever be divorced. On the contrary, we must constantly and strenuously affirm their perfect simultaneity and co-essentiality in perception and knowledge and thought. And it must be admitted that this is a rectification of Rosmini's way of phrasing and putting his doctrine that has sometimes to be made.

This then is the core of Rosmini's theory of cognition. As Mr Davidson puts it, "All that we mean when we assert a thing to be real, is that what we feel on any particular occasion *is*. By thus placing a feeling in being, we separate it from our subjective self, and regard it as having an existence of its own." But there is an ambiguity here. Do we merely affirm that the feeling *is*, or do we affirm that it is a feeling of some *thing*? Rosmini resolves our doubt in this way. What I affirm in perception is, that "that which strikes my senses exists". Sensation has two aspects. Facing us, it is passion; facing its own ("the foreign") principle, it is action. Sundering the sensation from us by subsuming it under Being, the intellect, thus, so to speak, seeing the other side of the sensation's passivity, regards it in itself as action. But to perceive an action, as term, is to perceive its principle in act—an agent—a being-in-act; and this, if its felt term is extended, is a perceived body. Thus action is discerned in passion, agent in action, and being-in-itself or substance in agent. Every foreign term of our sense is the proper term of an active principle that lies beyond our ken, just as a second person does; and our foreign term is *felt* by its own principle, of whose activity it is the proper term (with a feeling which is of course different from what it has for us), for activity is inconceivable except as feeling. From this, Rosmini infers that all units of real being are "animate" and sentient principles.

But our immediate concern is to know how any term ever comes to be extended, and this leads us to Rosmini's doctrine of space, which completes his *Erkenntnistheorie*. "In order to constitute a sentient principle, we must conceive a primitive term of sense (*αἴσθητόν*) virtually comprehending all the special actions of feeling that such a principle can ever perform; and in man this primitive and fundamental *sensum* is his own body, sensible in space." This fundamental or organic feeling has for its expanded term an unmeasured or indefinite space, which afterwards, when it has received delimitation and determination from the manifold contacts of "extra-subjects," or other realities acting on and modifying the constant feeling through the channels of special sense, is our felt and known body. When Mr. Spencer regards "the nervous system as at all times discharging itself," Mr. Davidson considers that he is just putting forward the obverse or physiological aspect of the fundamental feeling, which is like an ocean whereof all particular feelings are waves and wavelets. Every special and local sensation is a modification or disturbance of this general pervasive and permanent one; and a "foreign force" (that is, a foreign term of feeling, or felt activity other than our own), diffusing itself in the nervous living body, which is the extended proper term of the fundamental feeling, is, when subsumed under being, known to be a foreign or external body. Allow this organic spatial feeling, says Mr. Davidson, and you can understand how, though the soul is not always conscious, it is always ready to be awakened, for this feeling is always there ready to be disturbed. And Rosmini argues that you must assume it, for no space-continuum is possible except as the term of a

simple sentient principle, which feels at once the whole and all its parts. His speculation is exceedingly fine-drawn in detail, but it is admirably resumed by Mr. Davidson in these words:—"The only way in which extension or space can be continuous, or in which each part can so involve the rest as to be separable from them only mentally, is that the unity of the parts shall be constituted by something having the form of sensibility, that is, something in which the whole is present in each assignable part. That space involves a sensitive principle is, therefore, manifest." And that principle cannot be extended, as it would then have to be the extended term or felt continuum of another principle, and so on *ad infinitum*. Obviously the same line of reasoning would apply to Time.

The *New Essay on the Origin of Ideas*, published in 1830, appears to have anticipated the teaching of Bain, Spencer, and others, regarding the genesis of the consciousness of measured space. Its theory is that "Space is at once subjective and extra-subjective. As subjective it is known through the fundamental feeling; as extra-subjective, through touch and motion." And Mr. Davidson adds, "In this way are reconciled the doctrine of Kant, who regarded space as merely subjective, and that of those psychologists who hold that it is an acquired perception, derived from the terms or, as they incorrectly say, the *objects* of sense."

The characteristic of Rosmini's Logic is its deduction of all principles of reasoning from the intuition of Being. Hence it is the second science of intuition. "Being is the object of intelligence" is "the principle of Cognition:" "That which is, is," "the principle of Identity"; and from those two, which are but the intuition of being reflected on, explicated and formulated, are derived all others. The principles of Substance and Cause are derived in this way:—"When we, intelligent beings, supply being to *sensitive perception*, we thereby form the idea of substance, that is, of a being conceived by us as existing in itself and not in another. When we supply being to the *intellectual perception* of an *action*, then we form the idea of cause, that is, of a substance performing an action. . . . Thus the intellect completes sensation and arrives at substance; completes perception and arrives at cause." Cause is substance in act, and as substance is always in act, substance and cause are one thing from obverse points of view. When, however, Rosmini explains the distinction between sensible qualities or accidents and substances, by saying that of these we can affirm being, while of those we cannot, unless they are united to these, he appears to assume a new potency in our intuition of being, which will not be easily granted, namely, that it gives in itself the discernment of accident from substance, letting us know what is a perceivable reality in and by itself, and what is not. It is difficult to understand how the intuition of being is also the intuition of an intrinsic order in being. But here perhaps, as in the case of "ideal being" itself, the feeling of "meity," and "the fundamental feeling," the only appeal in the last resort is to each man's introspective reflection. Does he, after due search and

analysis, find them, and find them so? It follows with Rosmini that cause is always metaphysical—an agent, active entity, or principle of activity; and that “physical causes” or conditions only mark the locality of the true cause.

The first proposition of the Psychology is, “The soul is felt by itself”. It is therefore the principle of feeling, and only as such, *i.e.*, as a sensitive living active principle, does Rosmini, like Aristotle, consider it the subject-matter of Psychology. The *Ego* belongs to Logic. “The human soul is an intellective and sensitive subject or principle, having by nature the intuition of being and a feeling whose term is extended, besides certain activities consequent upon intelligence and sensitivity.” The units of sense cannot find their unity in themselves, nor in any one of themselves, for one sensation cannot be aware of another; therefore, the unity of special sensations and of the body, the expanded term which contains them, must be intelligence: and this is what is meant by calling the soul (*ψυχὴ νοητικὴ*), the substantial form of the body, as Aristotle does in the famous definition of the *De Animâ*. The soul is “simple” because unconditioned by space; space, on the contrary as already demonstrated, is only possible as the felt term of a soul, its principle and condition. The soul is not thinkable in any terms of space, either as solid, surface, or point; but its simplicity means “that the whole of it is in the whole and in each of the parts”. Indivisibility and immateriality are other names for simplicity. Immortality follows from such simplicity, for the simple soul, as incomposite, cannot be corrupted or disintegrated. Also it cannot die, because it is the giver of life, and is life itself. Besides, as intelligent, its inseparable form or constitutive principle is the eternal immutable idea of being, which it intuites. Divested of the body, it will retain self-feeling and the intuition.

For all these reasons, Rosmini might equally have concluded that souls are increate and eternal, and always have been, as well as always will be; and no doubt he would have done so, if the saint had not obstructed the philosopher. And this would also hold of “the elementary souls” or “animates,” of which he thinks all nature is made up. For, if each material atom or unit is of necessity united, as its term, to a sensitive principle which constitutes its unity or atomicity; then, these sensitive principles must be eternal and indissoluble, in as much as, if they went out, their terms, that is, the whole material world, would also go to nothing; and even if a single one of them ceased to be, an equivalent of matter would be annihilated—a thing that is commonly reckoned inconceivable. But Rosmini contrives to think that in some way they might coalesce and cease to be themselves, without ceasing absolutely. He argues that, as one term makes one principle, and as there are not many spaces but one continuous space, so there must be one sensitive principle of space, a kind of *anima mundi*; and that the differentiation and individuation of sensitive principles out of this *materia prima* of souls, is effected by the introduction of new terms, *i.e.*, separate

bodies, or limited forces diffused in the single original expanded term as modifications of it. This is very ingenious ; but it requires a *deus ex machinâ* to create supply and introduce the new terms ; and this no doubt will be a merit with the orthodox followers of Rosmini. To others, the demiurge will appear an entity more than necessary. Moreover, if a sound view, it is evident that it applies equally to human souls, and tells against their immortality, for, when divested of their bodies, they will as sensitive principles have but one term, and therefore lapse into the *anima mundi*, while even as intellectual principles, having but one object, "ideal being," they will merge in one common reason like that of Averroes—one common limbo of souls where all lie oblivious in one undistinguished heap. So, in striving to compass a theory of creation, we have obtained a theory of natural dissolution and absorption, and must again bring in the *deus ex machinâ* to sustain souls in independent being and personal continuance.

The philosophy begins to lean on the creed. Rosmini's principle of multiplication and generation is a curious corollary of what has just been discussed. When a term divides, its principle multiplies. But how can a continuous material term divide, so long as its principle is one, and how can the principle be more than one, so long as the term remains undivided?

So far our argument has gone on Rosmini's own lines, and only questioned the consistency of his psychological speculation with itself ; but one cannot avoid going further and seeing and saying that there is much in these speculations that is fanciful, arbitrary and unverified, whether they are self-consistent or not. They are a kind of poetry, or ideal reconstruction and imaginative rationale, like Macvicar's, Clifford's, and Hinton's, and must be distinguished from Rosmini's valid and verifiable metaphysic. The same general remark applies more or less to the "Cosmology," "Ontology," "Natural Theology," and "Deontology," that follow, and complete the Rosminian cycle. Much in them also appears adventitious and arbitrary, and only very loosely and often artificially connected with the Ideology and Logic—much seems to be elaborated in the interest of foregone assent and adhesion to the Church-system of opinions.

In spite of laborious effort after compacted totality, and almost anxious scholastic interweaving of divisions and sub-divisions, this tail-piece is really very indifferently articulated, and drags its slow limp length along in a rather dreary and unedifying way. It is a sort of *pot-au-feu* into which Rosmini tosses the detached pieces of his Catholicism, all and sundry, with the hope that the result will be a philosophical *consommé*.

The Cosmology busies itself with the rehabilitation of the Church-dogma of creation, by means of the new-found principle of Being. All beings are contingent but one, which is eternal and necessary, because its essence or idea includes its subsistence or reality ! Thus creation and creator are given at one stroke of logic. But the logic is sophistry, unless reality is to be confounded with the idea of reality.

If this cannot be, then all beings without exception are equally contingent, according to Rosmini's implied definition of contingency; and their contingency is no way distinguishable from their eternal actuality, to which, as already seen, a close following of his Ideology clearly points. A world of eternal units of being in myriad-fold interactivity—elementary souls and intellective souls—is what it indicates.

The same arguments, *ex contingentia mundi*, and from idea to reality, reappear in the Theology, and along with them a modified form of the Kantian moral argument;—all propped up and galvanised into a semblance of renewed vitality by means of "Ideal Being". This principle also supplies a new argument of its own: That eternal infinite object requires an eternal infinite subject or mind. But, as Mr. Davidson sees, this postulate is unnecessary, for Being is given to each human mind as infinite or of indefinite applicability; and, I may add, its eternity is sufficiently secured by assuming the eternity of a single finite mind, the legitimacy of which assumption is virtually granted and justified by the Ideology and Psychology. The propositions and phraseology of the Ontology, again, often make us feel that the pale shade of scholasticism is revisiting us, and the chill touch of past abstractions is upon us. There are three kinds of Being, ideal, moral, and real; and these three are one, a sort of transcendental trinity. Truth and Goodness are not relations of Being, but are themselves Being. The Supreme Good is "that which completes and perfects"; and the sense of obligation is elicited by this manifesting its intrinsic necessity to the soul. Yet even here, Rosmini is happily inconsistent; and we are sometimes allowed to see that ideal and real being are only aspects of being—*i.e.*, being as known and as felt; that "moral being" is only a relation of real beings to real, and to ideal being—to being taken as an ideal, *i.e.*, in imagined perfectness; and that this ideal is what the Supreme Good is, and that its manifested necessity which elicits obligation is simply the intrinsic and irresistible attractiveness of the ideal. "Moral being" consists, in fact, in a due regard on the part of intelligent agents for the several realisations of being according to their worth and measure. It is a certain strain and tendency of real beings endowed with intelligence and will—a kind of equity that suggests the Aristotelian principle of the Mean. "Recognise being as it is in its order," is the moral law.

Finally, the Deontology treats of what being ought to be; and is, accordingly, the science of the perfection of being, physical and intellectual as well as moral and human. In the sketch Rosmini only deals with the last. Perfection of will by will is moral perfection. But will is not discovered for us by analysis, and is not defined except as "essence of personality," which only lands us in greater obscurity. Nor is perfection defined; nor distinguished from or identified with happiness; except in a vague way in the Eudæmonology, a branch of human Deontology, which treats of the excellence of virtue, showing that it lies in *joy*, beauty, and dignity; and again in "the science of rational right," where we are taught that the rights of private property

are to be respected, because to deprive a man of his property is to cause him *pain*. This is as near as we can get to Rosmini's view of the ethical end.

The main lesson of the *Politics* is that the most powerful political means is the Roman Catholic religion; and the science that consummates Rosmini's philosophical efforts is "*Cosmopolitics*," the doctrine of the government of the universal theocratic society, that is to say, the theory and vindication of the pretensions of the papacy to spiritual and temporal supremacy!

In view of this anti-climax, it is easy to say that Rosmini would have been a better philosopher, if he had not been so good a Catholic—so extravagant and almost fanatical a lover of Mother Church. But while we have here one more illustration of how impossible it is to serve two masters well, where each claims our entire allegiance; and have once again presented to us for our bewilderment that superlative human mystery, the friendly co-habitation of devout superstition and clear-eyed reason in the chamber of a single mind; we must not let Rosmini's Ultramontanism, nor his predilection for Monotheism and Monarchy and manifold excursions in their favour, hinder our vision and appreciation of what is valid and fruitful in his thought. In trying to estimate what is true and significant, we must discharge from our view what is irrelevant and extraneous, and often inconsistent with his first principles. It has been our endeavour to give salience and pre-eminence to these. In doing so we have only followed Mr. Davidson, who by careful editing, annotation and collation of the most important passages of Rosmini's leading works, has done his best to elucidate and make prominent what it most concerns us to know in Rosmini. His silences are often as significant as his utterances; and for both he deserves the commendation of those who are able to judge of the difficulty of his task. Over and over again it is made evident to the reader, especially by what he leaves unsaid, that he is by no means ultra-Rosminian; and his occasional critical corrective and judicial notes encourage one to trust him as a fairly impartial guide. In minor matters, we have to thank him for an excellent synopsis, two indices, marginalia, and a bibliography, which go to make his work a most readable hand-book and guide to Rosmini.

Removing the ecclesiastical accretions and accommodations, the ill-fitting robes and furniture of the priest, changing so much of the terminology as is uncouth and archaic, and allowing for figurative language and an occasional poetical licence, we shall find the real and lasting Rosmini. Then, asking what is new, we must allow for some things borrowed, such as the distinction of matter and form from Kant. Asking what is quite his own truth, and will live and take effect, one may venture to say, his enucleation and exhibition of the first principle of knowledge and being. This appears to be substantially true, and to offer for the first time a way of philosophic escape from the vicious circle and unreal world of sensism, subjectivism and phenomenalism—where appearances appear to appearances without end and without beginning in being, where all is

becoming and being never is, all is appearance and no *thing* ever appears to any *one*. Doubtless, it is open to metaphysical puritans to complain that Rosmini has assumed at the outset the whole world of things and thinkers, the world of ordinary and scientific experience, and on this account to reject his entire philosophy as vitiated at the first step. Their demand is, that the individual philosopher shall produce the world by turning inside out the contents of his private consciousness in a kind of elaborate and superfine self-disembowelment. Philosophy, however, is not such construction or creation, but re-construction and explanation. And, in accepting the world as it is for common sense, and the facts of common conjoint knowledge, as the data and raw material of his rationale, or reconstruction for reflective reason, Rosmini has done no more than Kant and all other philosophers have done before him, either openly or surreptitiously. He not only does so, but may be said to specially glory in this deed, and to offer his philosophy in its main features as above all else rationalised common sense and sanity.

It is impossible to close, without paying him a last tribute, which is suggested by the sentence that ends his book. "It was as a school of humanity that philosophy was conceived by Plato." So may it be said of Rosmini. When one considers the seriousness, fervency, and encyclopædic variety and completeness of his work, it becomes more and more abundantly clear that he aimed at making philosophy a symmetrical and humane education of the individual and social spirit.

J. BURNS-GIBSON.

The Development from Kant to Hegel, with Chapters on the Philosophy of Religion. By ANDREW SETH, M.A., Assistant to the Professor of Logic and Metaphysics in the University of Edinburgh, and late Hibbert Travelling Scholar. London: Williams & Norgate, 1882. Pp. 170.

'Poor Kant,' as Dr. Hutchison Stirling somewhere calls him, has in this centenary of his masterpiece met with a good deal of friendly criticism: criticism of the kind which seems so desirable until we taste it, which has all an enemy's candour, but proves to be really less palatable for wanting his acerbity. Kant however is probably by this time indifferent to these demonstrations of affection, and sees with equanimity the structures of his speculative and ethico-religious philosophy demolished until nothing but the key-stones remain hanging precariously aloft.

The key-stones are of course the Unity of Apperception and the Categorical Imperative. These necessary facts remain as the chief positive result of Kant's speculations after all sifting and discussion. Fichte's achievement was to blend them in the conception of the Ego naturally striving to realise its own infinity. The hindrance and condition of its striving he called the Non-Ego, and so left it without much further

elucidation. Schelling took up the cause of this neglected factor, and explained it to be Nature and the antecedent in several stages of the individual Ego or Intelligence. Later he regarded Nature and Intelligence, Object and Subject, as equilibrating manifestations (one preponderating here, there the other) of Absolute Reason, from which they are evolved. Hegel found this absolute Reason too much like Spinoza's Substance, and preferred to take it not as an indifferent *præ* from which Nature and Spirit proceed, but as very Reason, identical with Nature and Spirit, and with the process of the development in which it actualises itself. To follow this process according to that natural dialectic of reason, nature, history, and ordinary thought, which Fichte first systematically utilised, was Hegel's philosophy.

Such is the briefest outline of Mr Seth's sketch, itself in outline, of the movement from Kant to Hegel. That it is not exactly new is no objection to it (there would have been grave objections had it been new); for the English reader will need to hear it pretty often before he vividly remembers it: and the present work really has a certain freshness, both because it is an account merely of the movement and therefore emphasises only the most prominent doctrines of each thinker and the relations between them, and because of the goodness and facility of the exposition itself. The style is excellent, or rather would be so but for the Germanisms which sometimes disfigure it—the least elegant of all foreign idioms that have invaded our speech. Forty or fifty years ago they were perhaps sometimes forcible; now they are always grotesque, and belong only to the inferior resources of jocosity: *e.g.*, "That the unity of rational experience is identical with the ultimate synthesis of things, goes in Hegel, of course, without saying".

The second part of the book, on the Philosophy of Religion, has greater novelty for the English reader. It contains a pretty full account of the connexion between Kant's Ethics and Religion and of his work on *Religion within the Limits of Mere Reason* (of which a translation exists, but which is very little known), and also a general view of Hegel's Philosophy of Religion. All this ought to be read with interest, especially the latter part. For the public which takes any interest in the things of the mind is now well aware of the existence amongst us of an Hegelian school, or of a large number of men who have been greatly impressed by Hegel's speculations; and it is understood that the chief reason why they prefer his mode of thinking to the tradition of these islands is that it seems more reconcilable with their religious feelings and aspirations. Whether this is really the fault of the Experiential Philosophy, or of the way in which it has usually been expounded, is worth considering: or whether it is due to impatience and unreasonable expectations on the part of those who have only studied it superficially, instead of labouring strenuously to make the best of it; or must be attributed to prepossession in favour of other systems and methods recommended perhaps by teachers justly revered. Whatever the cause, the fact is certain; and though it is very unfortunate if the Experiential Philosophy be on the whole true,

there may be some compensation from the controversy and stir of thought which are likely to result.

The use of controversy however greatly depends upon its having definite issues ; and it seems that these will no longer be the same as those that were fought over with the disciples of Kant. According to Mr. Seth the whole polemic against the psychological side of Kant's doctrine is out of date.

"It becomes unimportant," he says, "for philosophy to insist on the *à priori* as against the *à posteriori* origin of conceptions. The conceptions remain the same, though the whole philosophy of the Associationists be admitted. Indeed as regards the individual, or at least the race, the conclusion seems plain that all ideas and thoughts, without exception, have been beaten out by the slow process of experience. But the ultimate attainment of these conceptions is itself the best proof that they are involved in the structure of experience, independently of their recognition by this or that individual knower."

Nor need we dispute any more whether the method of investigation shall be *à priori* or *à posteriori*.

"The objections," says our author, "to which Hegel's synthetic or genetic mode of presentment has given rise—that his philosophy is an *à priori* system, a metaphysical cobweb spun in flagrant disregard of experience, and so forth—may be summarily dismissed, for they have their root in misconception and ignorance". "Hegelianism, it must be premised, has in the individual reflection of its author no other basis than the bit by bit experience on which empiricism builds." "It is vain to suppose the specific nature of reason can be learned otherwise than by study of the existent fact. Hegel boasts that his deductions represent 'the march of the object itself'. This is not always the case ; but where it is true, it is so simply because he has first buried himself in the object. The evolution may appear to be completed *à priori*, but its different conceptions and principles are connected by Hegel for no other reason than because the study of facts has revealed to him the bond that unites them. It would be more correct to say that in this way the true meaning of *à priori* emerges, when it is found to be identical with the ripest results of so-called *à posteriori* research."

Closely allied with this view of Hegel's method is the explanation that his Logic should not be regarded as a *præ* of Nature and Spirit.

"Hegel suggestively calls his Logic 'the kingdom of shades,' as if to hint that it is but the ghost of reality. It is probably more conducive to sober thinking to present it habitually in this way (as the ghost or abstraction of a factual universe) rather than in the *à priori* fashion which suits the Hegelian method." "Then as for what is said of the system of thought-determinations as passing over or projecting itself into Nature ; metaphor apart, these phrases merely mean that that system [of Nature] is, as every one can see, in its very notion an abstraction."

If this is the interpretation of Hegel which commends itself to his English disciples whole prairies of debatable land are at once annihilated. For every one must admit that Quality, Quantity, &c., are legitimate abstractions from experience. And to take Nature absolutely is plainly to overlook the fact of its existence in consciousness.

Mr. Seth indeed has not clearly reconciled his view of Hegel's really *à posteriori* procedure with the famous triple process of dialectic: but he gives hints toward such a reconciliation. "To Hegel," he says, "this method presented itself—when stated most simply and concisely—as the systematic recognition of the fact that there is no positive without a negative, and that the negative is yet only the path along which thought passes to a fuller positive". Now clearly the first part of this statement, that "there is no positive without a negative," may be regarded as a slightly exaggerated expression of the psychological doctrine of relativity, that all knowledge involves contrast: exaggerated, because the negative of a concept is more than any one contrast; it is the sum of possible contrasts, or the contradictory. If, however, "the negative" means any contrast, we may reconcile the dialectic with *à posteriori* procedure, by allowing an appeal to facts to select the appropriate contrast from amongst the many which dialectic indicates. Similarly at the third step of the dialectic, the attainment of a higher positive: there may be more than one possible consummation of a position and its contrast; and experience must determine which is true. As an example, let us take an application of the Hegelian method by Mr. Seth himself. Reviewing the history of opinion as to the claims of Reason and Revelation, he observes that in the middle ages Reason was regarded as subordinate to Revelation. The Enlightenment, by way of contrast or antithesis, took Reason to be supreme and Revelation an imposture. A third position is that both Reason and Revelation are normal and divine; and this, says Mr. Seth, is "occupied by the best thinkers of the nineteenth century". But another 'third position' has been suggested, namely, that what are ordinarily considered to be revelations are not intentional deceptions, but natural involuntary illusions, which are often useful in checking the puerile reason of barbarians. Here then are two alternative 'third positions'; and it is for experience to choose between them.

Again, if we seek to join issue upon really fundamental doctrines it is very important to observe exactly where the controversy arises. For instance, as to the Unity of Apperception—the doctrine that the synthesis of nature and experience is in consciousness—it would be a great mistake to suppose that this is rejected by Experientialists. Mr. Spencer no doubt rejects it: but no disciple of Berkeley or Hume can do so. It is not as to the existence but as to the nature of the unity that Hegelians and Humites (if I may use these expressions) differ. The former attribute the synthetic unity to the self-activity of Reason, the latter to mere law. If the Empirical Psychology be admitted, the Humean doctrine will not be easily avoided. And, on the other hand, it is not easy to reconcile the self-activity of Reason with the assurances we often hear that the unity of apperception is nothing apart from the synthesis. This is only one form of the question as to the nature of Reason itself, and the propriety of printing it with a capital letter: for if it is self-active I think it deserves a capital. But if to take it as self-active is to make it a thing-by-itself, and if that be

absurd—if it is really only an abstraction from the facts of reasoning—to give it a capital letter is like decorating a communist with a blue ribbon.

In Ethics, too, there is probably less difficulty in reconciling the Hegelian than the Kantian view with (let us say) Mill's, since the former recognises movement and development in morals as in everything else, but here no doubt there is room for discussion; and as no one is entirely satisfied with Utilitarianism, positive contributions to ethical theory from the Hegelian point of view are sure to be received with attention and interest. As to free-will, Mr. Seth says, "the point to be grasped in the controversy is that a man and his motives are one, and that, consequently, he is in every instance self-determined". If so, no Experientialist need wish to continue the controversy.

But, apart from particular questions, it is usually supposed that there is a profound difference between German and English nations of the nature and scope of Philosophy itself. Mr. Seth however says:—"The object of Philosophy is the completed system of experience, and the object remains the same whether it be regarded *in ordine ad universum*, as a self-developing system, or *in ordine ad individuum*, as material painfully gathered and pieced together. Completeness alone is necessary to exhibit the identity." Now any Experientialist may say that; though he will of course deprecate the suggestion that any one is able at present to construe experience *in ordine ad universum*. But he will maintain that that is the regulative idea of philosophy, and hope that in a hundred thousand years some approach may be made to it. Meanwhile he addresses to the Universe the words of Fluellen:—"Ancient, I do *partly* understand your meaning".

It seems then that when both parties regard sobriety, the opposition of Hegelians and Experientialists is less than we are apt to suppose. And it is agreeable to the law of Evolution that the history of Philosophy should tend to equilibrium and harmony. It would however be unjust to Mr. Seth to call him an Hegelian: not that he would by any means repudiate that school; but there appears to be none of its definite doctrines to which he unreservedly adheres. Criticism of History he takes to be the master's chief service to philosophy. He himself criticises very impartially and trenchantly all the thinkers whom he passes in review. Kant, Fichte, Schelling are dispatched in turn. Kant on whom he dwells longest turns out to be as unsatisfactory in Ethics and Religion as in the speculative province. And if Mr. Seth will give his critical faculty free scope in relation to the last great figure of that philosophical movement, we shall soon hear some one exclaiming, 'Poor Hegel'!

CARVETH READ.

L'Hérédité Psychologique. Par TH. RIBOT, Directeur de *La Revue Philosophique*. Deuxième Édition, entièrement refondue. Paris: Germer Baillière, 1882. Pp. 417.

The new edition of M. Ribot's well-known essay has been so completely remodelled that it may almost claim to be considered as a

totally distinct work. Even the title has been altered, not without reason; and the arrangement has been largely modified in many places. The part devoted to the Causes of Psychological Heredity has been entirely removed: while on the other hand, numerous additions have been made to the remaining portions of the volume from recent monographs, and the lacunæ noted in the original treatment have been carefully filled up, especially as regards the ultimate physical basis of heredity in general. By the suppression of unnecessary detail, however, the number of pages has yet been reduced from 546 to 417, so as to check the great diffuseness of the original work. As a whole, the book is certainly much improved in its new form, both as regards style and matter. Still, even now it will hardly be so necessary or so valuable in England as in France, because it consists in large part of theories or facts drawn from Galton, Darwin, and Spencer, whose works we in this country have in our own hands. To these fundamental materials, M. Ribot has added much of his own, much too from fresh French, German, and Italian sources. But it is no disparagement to his work to say that it is neither so novel in thought nor so generally important as his *Maladies de la Mémoire* (MIND XXIV., 590), in which perhaps he did himself full justice for the first time as an original psychological thinker.

Careful comparison of the two editions shows that the alterations are numerous and judicious. As regards general tone, the author seems to accept evolutionism more fully and less hypothetically than before: and he also gives a wider range of opinion on evolutionary subjects. In the first part, on the Facts of Heredity, he has suppressed some doubtful or marvellous statements (such as that of the Polish Jew who could read any page of a closed book), and has added new examples, taken from more recent works, such as Delbœuf's researches on colour-blindness, and Helmholtz's observations on the cochlea. The chapter on heredity of memory has been largely altered in accordance with M. Ribot's matured views on that subject; and the attempt to distinguish "faculties" in the intellect has been wisely abandoned. The chapter on heredity of will has also been omitted, and a good chapter on heredity in history, on the other hand, has been added in its place, containing most of the same facts. In all this portion of the work, however, it is to be regretted that M. Ribot (following Mr. Galton) still employs numerous examples from Greek and Roman history, which can hardly be said to afford a sufficiently firm basis for scientific induction. The gossip of Herodotus, or still worse the inventive imagination of Plutarch, does not give us any certain warrant for facts about Æschylus and Sophocles; while the virulent satire of Tacitus and Suetonius must not be accepted as evidence against Nero and Agrippina. The story of Caligula's little daughter trying to tear out the eyes of her playmates, for example, is a mere bit of obvious tale-telling, such as nobody would heed for a moment if he were told it about the child of a Russian Czar or a German Emperor at the present day. Indeed, some of the facts alleged are so weak that they are likely rather to damage the argument than to strengthen it, in the eyes of waverers.

The second part, dealing with the Laws of Heredity, has undergone rather less transformation. The statistical portion, however, has been enriched by De Candolle's researches into the families of scientific men, which help to eke out Mr. Galton's investigations in the same direction. The two together utterly eliminate the possibility of mere chance. Under the head of "Exceptions to the Law of Heredity," M. Ribot gives some new extracts from a curious paper by Prof. Lemoigne of Milan, in which the chances of hereditary resemblance to either side of the parental house are mathematically formulated with much ingenuity. With regard to the question of hybridism, and the intimate manner in which paternal and maternal qualities are often mixed up in the offspring, it may be worth while to mention that among the few mulattoes whom the present writer was able to observe as a teacher in Jamaica (where he had charge for some time of the small Government College), he did not find that the most European-looking boys had by any means always the most European intelligence. Innervation seemed comparatively independent of external physique, though of course the interrelation must probably have been closer in some way or other than it appeared to his eyes.

The third part, on the Consequences of Heredity, contains some striking additions from M. Jacoby's curious book (*MIND* XXV., 597), as well as from De Candolle and others. It is also supplied with fresh material from Mr. Herbert Spencer's *Principles of Sociology*; and, indeed, the tone throughout is perhaps more decidedly Spencerian than formerly. It applies the doctrine of heredity to ethics and social science in a rapid and effective manner.

The last part gives a brief *résumé* of the principal theories of biological heredity, which M. Ribot sets down boldly as "the cause" of psychological heredity, without any fear of the idealists before his eyes. He allows, however, that since psychical phenomena are bound up implicitly in the physical phenomena of organisms, it might be juster to describe psychological heredity as a case or phase of biological heredity. He abstracts briefly Mr. Darwin's hypothesis of pangenesis; Mr. Galton's modification of that hypothesis; Mr. Spencer's theory of physiological units; and Hæckel's doctrine of perigenesis. This new portion greatly adds to the value of the work, which was left before suspended somewhat aërially without any definite physical basis.

As a whole, the book is brought well up to date in its subject, and is thoroughly clear, readable, and interesting. It holds out less promise than of old, and it performs its promise a good deal better. The old edition needed compression; now that it has been well pruned and carefully grafted with fresh stocks, it has blossomed out into an excellent and fruitful tree. It is still somewhat lacking in originality—that much one must honestly admit: but it is a careful, studious, and suggestive summing up of whatever has been best thought and best said on the important subject with which it deals. It ought certainly to do much towards popularising in France the results of the best English investigations in this direction.

GRANT ALLEN.

Die Seele des Kindes. Beobachtungen über die geistige Entwicklung des Menschen in den ersten Lebensjahren. Von W. PREYER, ord. Prof. der Physiologie an der Universität zu Jena, &c., &c. Leipzig: Grieben, 1882. Pp. xii, 424.

This work from the pen of the well-known professor of physiology at Jena is, so far as I am aware, the first systematic record of the mental development of a young child. The little work of Tiedemann though having the appearance of methodic study is not full enough to be regarded as a complete chronicle. And the same applies to the highly valuable notes recently published in England and elsewhere. Professor Preyer not only takes us over the first three years of life, noting all the chief movements of development and, what is equally important, noting the fact of no advance when it occurs, but he has gone to work in a very serious manner to explain the successive appearances. He is an enthusiastic evolutionist, and his evolutionism here stands him in good stead. To this it must be added that he displays a considerable degree of skill in psychological analysis. He has an insight into the simple mental phenomena of infant life, which is undoubtedly aided by his physiological experience and his observation of the actions of the young of the lower animals. Here and there, perhaps, the author gives too much rein to the natural impulse to interpret observed facts, and is carried into the region of doubtful hypothesis; but on the whole he keeps close to the facts, and contents himself with drawing from these pretty obvious conclusions. Thus the value of the book lies after all mainly in its record of observations. The subtlety and penetration of these are no doubt connected with the fact that the author's reflections have made him quick to see what others have not seen. Theory and observation must to some extent go on together, and while it is a commonplace that theory must proceed to build on a basis of observation, it is also true, though less obviously so, that the finest observation is guided by scientific conjecture. The present work seems to me a happy illustration of this fruitful conjunction. The great risk in the present case is due to the fact that the sketch of the infant mind is drawn from a single model, the writer's own boy. As every experienced nurse knows, young children differ enormously from the first in respect of capability and the times of appearance of the several attainments. A mere glance at the records of Tiedemann, Darwin, and M. Taine will suffice to show this. The date at which the child learns to perform so simple and necessary an action as carrying the hand to the mouth is not by any means the same in all cases. Dr. Preyer is not of course oblivious of this source of error. He seeks to guard against it by an occasional reference to other records. At the same time it is very desirable that other observers as diligent and as systematic as he should test his results. Meanwhile it may be safely said that he has given an account of early mental life which for fulness, accuracy and intelligibility is far in advance of anything that has preceded it.

A word or two may be said at the beginning respecting the author's method. He tells us that with the exception of two considerable

interruptions he occupied himself in observing his child almost every day at least three times, in the morning, at noon, and in the evening. Nor was he simply an observer: he was allowed to experiment as well. That is to say the whole training of the child was so far as possible given over to him, and all interference with his plans by the customary modes of teaching (*Dressuren*) was excluded. In this way he was able, for example, to test the child's power of remembering, by introducing impressions and afterwards seeing how far they were recalled, certain that there had been no disturbing influences at work in the meanwhile. Finally, most of the facts given here are, he tells us, the result of his own observation, the rest having been communicated to him by the child's mother, to whose intelligent cooperation he evidently owes much.

The work falls into three parts, the development of the Senses, the Will, and the Understanding. The development of Feeling is dealt with partly under the first head ("The earliest organic feelings and emotions"), and partly under the second ("Expressive movements"). The third part is mainly concerned with the early stages of speech. This distribution of the subject-matter is no doubt open to criticism from more than one point of view, yet it has a convenience of its own. Sense, movement, language may be said roughly to mark off the successive stages of the period of life here reviewed. And it is evident that the observable facts naturally fall under one of these three divisions.

The first part takes a very complete survey of the Senses from the very moment of birth, and the results reached are compared with those obtained in the case of new-born animals, as chickens and guinea-pigs. Here sight takes the lead. Sensibility to light seems present from the first. With respect to colour-discrimination no attempt was made to obtain results till towards the end of the second year. From this time careful experiments were undertaken and repeated. A number of colours were placed before the child and the names taught him. He was then asked to pick out of a number of colours a particular one, as 'red' and so on, and also to name a particular colour placed before him. The experiments appear to show conclusively that the child discriminates and recognises the colours at the red end of the spectrum sooner than the others. Yellow comes first, then red, lilac, green, and last of all blue. One may be grateful for these results and yet be surprised that Professor Preyer did not seek to test the discrimination of colours earlier, in some such way as that followed by Sir John Lubbock and others in the case of ants, &c. A very careful record is given us of the first movements of the eyes, including those of the lids. These observations bear out the conclusion that the correlated symmetrical movements have in the case of every individual to be selected from other possible combinations, though the process of selection is facilitated by a connate disposition. Professor Preyer has an ingenious theory for explaining the habit of blinking at the sudden approach of an object. This appeared distinctly on the 60th day. He dismisses the supposition that this movement is the

result of an inherited impulse of fear. The infant from the first shut its eyes on the presence of too strong light. This is an innate action. The sudden movement of an object is disconcerting and produces a disagreeable feeling just as excessive light. Accordingly we may regard the later reflex as a special form differentiated from the earlier. This is borne out, the author thinks, by the fact that all painful states of mind have a closing of the eye, either partial or complete, as their instinctive accompaniment, while pleasurable states express themselves from the first by a wide opening of the eye. With respect to the interesting subject of fixing the eyes on objects the author reaches the following conclusions. Up to the 10th day there are no movements of fixation. The child only *seems* to look at an object that happens to be opposite the eye. At the same time it can turn its head towards a source of light as the window, just as it turns its head towards the breast, through an association with pleasure. The second stage is reached on the 11th day when the child after staring at one bright object (the author's face) turns the head to another, a light, near it. The third stage is entered upon on the 23rd day when the child follows a candle, held one metre before the eyes, to the right and left, upwards and downwards, with the *eyes*, and without any movement of the head. The last stage is that in which the child is able to turn the eye towards an object, and to seek for new objects in the field. This stage is reached in the first quarter. On the 81st day the child turned its eyes seeking an object (a drinking-glass) which was emitting tones. The author has also traced the development of the sense of direction and distance. He says that in the 68th week the child still grasped at objects lying beyond his reach. It seems to me that there must be great differences here. I tried a boy of mine with an object when just six months old. If the object was held a foot or less beyond his reach he made no movement. But as soon as it was brought pretty near the accessible point he made a decided grasping movement.

Coming now to hearing we find that sensibility is very deficient for some time after birth. The infant is born deaf, owing to the condition of the end-organ; and after the removal of this impediment, discrimination of sounds may be absent for several days. With respect to the auditory sense of direction the author ascertained that the first unmistakable movements of the head in the direction of a sound occurred in the 11th week. By the 16th week the movement had attained the precision and certainty of a reflex movement. Tactual sensibility in the several parts of the bodily surface was treated very carefully shortly after birth. The author concludes from his observations that this sensibility is less just after birth than it is afterwards; and that within the first 22 hours the inequalities of sensibility at different parts on the surface, though great, are less great than they are later. The sensibility to temperature, too, is almost wanting immediately after birth, though it soon attains a considerable measure of fineness. Thus the child will bear a bath cooled down to $32\frac{1}{2}^{\circ}$ cent. without apparent diminution of pleasure, but begins to cry when water of $31\frac{1}{4}^{\circ}$

or less is used. The sense of taste is more perfect at birth than any other sense. The discrimination of quality, namely, sweet, bitter, salt and sour, is possible from the first provided sufficiently strong stimuli are employed. If weak solutions are used the tactual sensation overpowers the gustatory, and the child is indifferent. Dr. Preyer says that olfactory sensibility though present from the first is not during the first months properly detached from gustatory. In the 17th month the child opened his mouth when a hyacinth was held near his nose, and proceeded to take it to his mouth. The first odours, those of the mother's milk, are inseparably bound up with sensations of taste, and the child in this case argues, he thinks, that pleasant odours imply a pleasant taste.

Among the earliest Feelings here taken account of is that of fear. Prof. Preyer contends, with considerable force, after Darwin, that fear is instinctive in the child. The timidity of young children before small animals can only be explained as the result of inheritance. This was first noticed in the 9th month, and as late as the 33rd month the child cried in a ludicrous manner at the approach of a puppy only a week or two old. The fear of falling when the child begins to walk is also instinctive. In the 21st month all the signs of fear were shown when the child was taken close to the sea; and this timidity displayed itself when there was very little movement and noise. I cannot but think that the author is somewhat hasty in assuming (p. 106) an inherited fear of the sea. Much of children's early shrinking is undoubtedly due to a kind of shock which is given by certain things. One may easily suppose that the vast expanse of water, especially when attended by movement and the peculiar voluminous sound, would produce such an effect. And it is certain that something of children's fear of animals, especially dogs, is occasioned by shock. A boy of mine first showed very decided and strong fear, amounting to childish terror, at dogs after one of these animals, which had secretly entered the room with his mistress and ensconced himself under the table, suddenly ran out towards the child barking. 'Bow-wow!' remained for months after the type of everything new and disconcerting. When hearing a strange sound he would run to his mother and hide his face, exclaiming 'bow-wow!' He showed a dislike to worms, which he also called 'bow-wow'. I think there is no doubt that inheritance plays a part here, but something must be allowed for the mere disturbance of shock. The fact that a child may be completely upset by the mother or father donning a slight disguise seems to me to point conclusively to this. Dr. Preyer's facts on this head are interesting, but hardly full enough. There is no reference to the seemingly whimsical timidities of children towards strangers. My observations have convinced me that there are certain peculiarities of face and tone of voice which at once arouse strong fears in the child; and M. Perez and others have pointed out that young children shrink from persons dressed in black. Would Dr. Preyer say that these are cases of an inherited association?

We may now pass to the subject of Will. The author sets out with

some observations on the nature of willing and not willing, and seems to imply that inhibition since it does not lead to movement is a case of not willing. But to resist an impulse is surely something positive, and very different from the properly negative condition of inactivity. And even from a physiological point of view it may be said that self-control implies an outgoing of motor energy, which is here employed in frustrating a movement instead of in executing one. Dr. Preyer, however, allows that his views on this point are likely to appear "doctrinaire". Passing to the region of observation, he tells us that the child is not born with a will, though he is born with a disposition (Anlage) to will. He distinguishes four classes of simple movements in the child—(1) Impulsive, (2) Reflex, (3) Instinctive, and (4) Represented, of which imitative movements are the simplest type. Out of these four classes all other movements, expressional and properly voluntary, can be derived. Impulsive movements correspond to Dr. Bain's spontaneity. Among examples of these he mentions the side movement of the eyes under the lids on waking up. But Dr. Preyer makes much less of these impulsive movements than Dr. Bain. He says their number is not large. And so far from deriving volition from spontaneity in the manner of the English psychologist, he thinks that it takes its rise in the increased excitability of the centres which arises in states of distress (as hunger), and which is the innate germ of longing (Begehrungsvermögen). Dr. Preyer begins by making a careful list of reflex actions, original and acquired, and gives the date at which the latter appear. He also has some important observations on the decrease of reflex excitability with growth, and on the first appearance of a distinct inhibition of reflexes. Under instinctive movements the author deals with all those which imply in addition to a sensory peripheral stimulation a central element constituting a certain mode of feeling or "mood". Sucking is a good type of instinctive action. It takes place only when there is a certain feeling (appetite). The author here not only deals with obviously instinctive actions, as sucking, chewing, &c., but brings out the instinctive element in a number of actions commonly said to be acquired. He makes a careful study of the genesis of the movement of grasping. This takes its start in a purely impulsive movement, the aimless moving of the hands hither and thither. To this must be added the reflex action of closing the hand on an object placed in it. Then follows the instinctive action of holding fast objects laid in the hand. A further step is taken when this holding of an object is effected by the opposition of the thumb. The clear manifestation of such a purpose shows itself in the 17th to the 19th week, when the child looks at the object in his hand, and consciously and with purpose holds it fast. From the fixing of an object actually held in the hand to the seizing of an object there is but a step. Then the action of grasping has become complete. Among other (partially) instinctive movements the author includes the holding up of the head, sitting up, standing, and walking. With respect to the latter he makes the interesting observation that a child brought

up among other young children who are partly able to walk will as a rule learn to stand and walk sooner than he otherwise would do. The record of the early progress of walking, with its accompanying movements, is very full and interesting. Coming now to imitative movements, we are told by Dr. Preyer that his boy first performed an imitative movement at the end of the 15th week. He pouted his lips when his father did so immediately before him. He had long done this on his own account instinctively, and the fact of this being an imitative performance was clearly seen in its great inferiority. It was not, however, till the 7th month that attempts at imitation appeared with any great distinctness, and not till the 10th that these attempts became thoroughly successful. Towards the end of the first year imitative movements became very numerous, and showed a marked improvement in skill.

Expressive movements are dealt with in a chapter by themselves. A careful investigation is made into the history of the smile. Both smiling and laughing are original expressive movements, which appear distinctly in the first month, and serve as signs of pleasurable feeling. The laughter from tickling which occurred in the 2nd month is distinct from the other. It is a reflex movement, and characterised by a difference of sound. The author in discussing these movements of expression has occasion to refer to Darwin's well-known observations. He makes the curious remark that for German children the English naturalist's statement that infants do not shed tears before the period from the 2nd to the 4th month does not hold good. Among the movements here traced are the well-known action of shaking the head to express rejection, and of nodding to express assent or acceptance. The turning away of the head from the breast as characteristic expression of disinclination appeared as early as the 4th day. This movement remained for a time a single one (to the right or to the left), and only passed into a proper shake when the child had learned to balance the head (in the 16th week). The other action, the nodding of the head, is not original but acquired, and acquired with great difficulty. Here again the author differs from the conclusion reached by Darwin. The action of pointing is referred in an interesting way to the impulse to grasp an object. In the 8th month the child betrays his lively interest in new objects, especially those in motion, by opening the mouth, fixing the object, and stretching out the hand. At this time one can hardly say whether he wishes to seize or simply point to the object. By the 14th month the child is able to point with all its fingers at an object to which his attention is attracted. By the 90th week pointing appears as the expression of a wish, and now the one finger is stretched out. Dr. Preyer dismisses the idea that imitation assists here, and refers the action to an inherited coordination of movements, fixing an object with the eye, opening the mouth, stretching out the hand and the finger, which combination seems to have come about (so far as I understand him) owing to its importance as a means of making known, and so of satisfying the feeling of hunger. It is curious that the author does

not refer to the child's habit of touching objects with the forefinger, the other fingers being wholly or partially bent, where there is plainly no room for indicating. Might not the particular position of the fingers in the act of pointing have been brought about by its obvious advantage in the finer sorts of tactual experiment? I would add that the author seems to me greatly to under-estimate the importance of imitation in the acquisition of this action. The child has had things pointed out to him innumerable times before he reproduces the action.

From expressive movements the author passes to consider properly voluntary or deliberate (*überlegte*) movements. These do not take place within the first three months. Before motives properly so called come into play numerous motor experiences must have been acquired through the working of the centro-motor impulses, the peripheral reflex stimuli, the impulse of imitation, instinct, and the feelings, and a certain development of sense and understanding must have been reached. Even such an action as the pushing away of a chair in the 11th month and the later movements of throwing away objects must not be regarded as done with conscious intention. Such properly voluntary actions emerge very gradually out of the above-mentioned, and more particularly the instinctive movements. The development may best be traced in the progressive mastery of the movements of seizing objects, and of those concerned in taking food (using the spoon, &c.). First of all the "representative activity" of the brain must be developed. After this an interval is necessary for the association of a representation of a movement with the presentation of a desired object. The author reaches the interesting conclusion that the first deliberate movements appear about the 16th week, that is to say, at the same time that the first attempts at imitation become successful. In point of fact the author seems, so far as I understand him, to regard imitative movements as properly voluntary, or as the first stage of deliberate movements (see p. 215). Still, by speaking of the "imitative stimulus" as one of the primitive forces which prepare the way for volition, he might be taken to imply that imitation is antecedent to volition. It is odd that Dr. Preyer makes no reference to vocal imitation in this connexion. I first felt sure of calling forth responsive chuckling sounds from my boy in the 8th week. By the 9th week I could count on it with tolerable certainty. Vocal imitation seems to me to depend on an inherited impulse which is connected perhaps with an innate sociality. The growth of the will out of these rudiments is said by Dr. Preyer to consist in a double process, the separation of movements previously conjoined, and the association of others previously isolated. "The will neither coordinates alone, nor isolates alone, it does both. And, what is most frequently overlooked, it effects in each region nothing perfectly new." It will be seen from this brief sketch of the author's views that he has thrown a new light on the process of early will-development.

The third part of the volume deals with the development of the Understanding. This is mainly an account of the genesis of the child's earliest concepts, and in connexion with this a very careful

record of the progress of speech. Dr. Preyer contends vigorously that the power of forming notions manifests itself antecedently to the use of language. The facts here given add nothing to those of other observers, for example, M. Perez in his interesting volume *Les trois premières Années de l'Enfant* (MIND, XII. 546). Nobody seriously questions that the child of 9 months has a certain power of abstracting from differences and noting similarity. This is obviously implied in the recognition of individual objects under altered circumstances. But the real point is what the notion or concept exactly consists of. Dr. Preyer gives the following account of it—"The often felt, localised, sweet, warm, white fluid, which is associated with sucking, forms a representation (*Vorstellung*), and indeed one of the earliest. When now this representation has often arisen, the single perceptions necessary to its formation become associated more and more closely. If then one of the latter appears, the memory-images of the others arise through a concomitant excitation of the appropriate ganglion cells; this means, however, nothing else than that a concept is present. For the concept arises through a uniting of marks (*Merkmale*)" (pp. 371, 2). This seems to me to be far from clear. So far as I understand it, what is here called a 'concept' is undistinguishable from what is properly called a 'percept' in which a mass of sense-experience is aggregated (though there is as yet no conscious analysis of the properties involved), and which is the material out of which clear concepts are formed. Of much greater value is the record of articulate utterance. The author has discovered that the child forms spontaneously all the sounds, and many more besides, which it afterwards utilises in the commonly adopted speech. The order in which different sounds are learnt is not the same in all cases, and does not appear to be governed by the principle of the least effort. Dr. Preyer has endeavoured to illustrate the condition of the child during the 'lall lall' period of speech by the parallel of diseased states of the speech-centres. In doing so he finds it necessary to advance a curious hypothesis of the central speech-organs, which are regarded as consisting of distinct centres, such as sound, syllable, word, and diction centres. This particular account of the speech-centres must be estimated by the physiologist. Whatever its value, I think that the author has succeeded in pointing out an instructive analogy between the two conditions here referred to. The child's inability to reproduce sounds which it understands, to form sounds with precision, and so on, has its exact parallel among forms of cerebral disease. And he seems to be on pretty safe ground when he contends that these deficiencies in both cases imply a want of perfect connexion between the various parts of the speech-organs, "impressive, central and expressive". The author has rendered a real service to the psychologist and the educator by his elaborate and painstaking history of the child's progress in the art of speech.

JAMES SULLY.

Institutiones Philosophiæ Naturalis secundum Principia S. Thomæ Aquinatis ad usum Scholasticum accomodavit TILMANNUS PESCH, S.J. Friburgi Brisgoviae: Herder, 1880. Pp. xlix. 752.

This handsomely printed volume is the first of a series of six, entitled *Philosophia Lacensis, sive Series Institutionum Philosophiæ Scholasticæ, edita a Presbyteris Societatis Jesu in Collegio quondam B. Mariæ ad Lacum Disciplinas Philosophicas Professis*, and intended to set forth the philosophy of the Society of Jesus, under the name of Thomas Aquinas, whose system was recommended to the study of the Church some three years ago by the papal encyclical, familiarly known as *Æterni Patris*. The history of this series is not without a certain interest, being intimately connected with that of a struggle which has profoundly affected and is still affecting the oldest and largest organisation in Europe.

More than half a century ago, when Philosophy in Europe was at its lowest ebb, when reason was attacked on every side, by sensism, which denied its existence, criticism, which denied its validity, and Hegelianism, which held that its laws were the great obstacles to the attainment of truth; and when the Jesuits, falling in with the tendencies of the time, were trying to force on the Church a kind of materialism after the manner of Condillac, Rosmini began his efforts to restore reason to credit and to make it the basis of religious belief. The way in which he hoped to do this was by taking up the traditional philosophy of the Church in its best form, *viz.*, in that of Thomism, and so systematising, rounding and completing it by means of new light and experience derived from modern thought, as to make it triumphant over scepticism both philosophical and religious. In these efforts he was soon so successful, that the Jesuits, hoping to gain him over to their order, were ready to second him and give up what they had before been falsely calling Thomism in favour of what was really Thomism carried up to date. Soon finding, however, that Rosmini entertained purposes entirely different from theirs and that he could not be used by them, they at once changed their tactics and assumed an attitude of the bitterest hostility toward him, doing everything in their power to crush him and his works. Failing most ignominiously in their attempt to have his philosophical writings placed upon the Index, and being well aware that these contained refutations, unanswerable by reason, of much of their teaching, they tried to accomplish by private calumny what they had been unable to achieve by open warfare, namely to produce the impression that Rosmini's works were full of the worst errors of every kind, and to induce the Church to restore Thomism in such a way as to exclude Rosmini's improvements on it. During the lifetime of Pius IX. they were completely unsuccessful in the latter of these projects; but hardly had a new and more pliable Pope ascended the throne, when they applied to him for a remedy against Rosminianism, in the shape of a rehabilitation of Thomism, pure and simple, as the philosophy of the Church, and a distinct condemnation of its improved form. But the Pope's hands were tied. The Congregation of the Index had declared Ros-

mini's works to be free from censure, and this judgment could not be reversed. All that he could do, therefore, was to rehabilitate Thomism, and this he did in the encyclical *Æterni Patris*, dated August 4th, 1879. A half loaf is better than no bread, and the Jesuits, having obtained so much, at once began to flood the world with books, professing to be "secundum principia S. Thomae Aquinatis," but really emphasising views that are often quite as much at variance with those of St. Thomas as with those of Rosmini, against which they were directed. Among these books is the series of which the first volume now lies before us. It is a significant enough fact that, although the work literally bristles with the names of philosophers, ancient, mediæval and modern, that of Rosmini does not once occur in it.

Natural Philosophy, as understood by our author, is "science considering natural bodies, in so far as they are subject to metaphysical reasons," in other words, what German idealists call "Naturphilosophie," as distinguished from "Physik" or "Naturwissenschaft". It sets out by assuming the universal principles of reason, and then endeavours, by means of these, to enter into the being of things ("universalibus rationis principiis innixa in ipsum esse rerum accuratius perquirendum incumbit"). The author makes no attempt to justify this procedure except by calling the views of those who deny its validity plagues or pestilent poisons ("pestis," p. 4; "pestiferum venenum," p. ix), impious, atheistical, and so on, in the usual polite and charitable way which Jesuits affect. The "universal principles of reason" which he adopts, seem to be the existence of a God, in whose inscrutability the solution of all dark problems is conveniently lodged, the infallibility of the Pope, the authority of Thomas Aquinas, and the impiety of modern physicists and philosophers, who, trusting to their own reason, venture to dispute any of these principles. "Nature," we are told, "in every way declares the glory of God" (p. ix). "As in all things it is naturally ordained that some men should follow others, so it has in all time been fixed and ratified by the wisest men, that those who have excelled in the most copious knowledge of divine and human things and in the most accurate insight into the beginnings and causes of individual things, ought to be followed in the study of truth" (p. x). The Pope "has been appointed by God, *optimus, maximus*, as the teacher and master of all the peoples of the Christian world" (p. x.). On his authority, moreover, we are informed that St. Thomas has, "by himself alone rebutted all the errors of former times, and supplied the most invincible weapons for the overthrow of those which, in perpetual round, are destined to arise hereafter" (p. xi.).

These brief quotations perhaps suffice to show that the work before us has no claim to be considered philosophical. If there were such a word as *philocratic*, that would properly designate it. It is a mere attempt to justify intellectual authority, such as the Catholic Church pretends to possess. It does not, of course, follow from this that the book is without value, and, indeed, it is not. In spite of its unphilosophical purpose, its numerous false reasonings, its frequent misstatements of uncongenial doctrines, its ludicrous display of shallow

learning¹ and its malign spirit, it contains a good deal that may be read with profit. It is divided into four books. The first, which treats of "The Essence, Nature, and Principles of Bodies," is divided into six "Disputations," of which the first deals with "the concept of extension or continuity properly so called"; the second, with "the nature of bodies as externally manifested"; the third, with "the principles of bodies"; the fourth, with "the various systems relating to the constitution of bodies"; the fifth, with "nature considered in itself"; and the sixth, with "natural causes". The second book, "On the Affections of Natural Body," contains seven "Disputations," the first, "on quantity and extension"; the second, "on quality"; the third, "on motion"; the fourth, "on the infinite"; the fifth, "on place and space"; the sixth, "on the compenetration and reduplication of bodies"; and the seventh, "on time and duration". The third book, whose subject is "The Genesis and Decay of Natural Things," contains two "Disputations," the first, "on the genesis and formation of the world"; the second, "on the generation and corruption of natural body". The subject of the fourth book, which contains but one "Disputation" is, "The Order and Laws of Nature."

This enumeration will give a general notion of the contents of the volume, which is written in rather faulty Latin, and in the driest of scholastic styles, with endless divisions and subdivisions. To point out all the false principles and reasonings which it contains would require a volume longer than itself. Two such principles vitiate it from beginning to end: first, the admission of authority in thought; second, the use of the hypothesis of an omnipotent God. The former renders philosophy unnecessary, and the latter, impossible. Of less extensive errors, the three most fatal are the confounding of the object of intelligence with the term of sense, the failure to distinguish between ideal determination and real distinction, and the identification of number with multitude. It is by means of these confusions that most of the arguments which seem to tell against the doctrines of modern science are rendered plausible. Throughout the author uses the term *object* sometimes in the Scholastic, sometimes in the Kantian, sense, apparently without any suspicion that the two differ *toto calo*.

In spite of all these drawbacks, there is much that is valuable in the book, many subtle and sound arguments directed against sensism and subjectivism. The whole of the chapters relating to continuity, space and time are well deserving of careful study, especially by those who have allowed themselves to be entangled in the puerilities of Locke or the illogicalities of Kant. Father Pesch shows clearly that space is not a mere form of sense, and as clearly that it is not a thing.

¹ Endless examples of this might be adduced. Mr. Herbert Spencer, who is combated as one of the impious, is known only as the author of *First Principles*, and G. H. Lewes, only as the writer of the *History of Philosophy*. We are told that *exoteric* as applied to Aristotle's works means *popular*, and *esoteric*, *private*, and that the latter were read by Aristotle "to his disciples alone in the Lyceum in the forenoon". Father Pesch seems never to have heard of Bernays's *Die Dialoge des Aristoteles*.

But the impression with which one leaves the book is that any attempt to restore Scholasticism to credit with modern thinkers, unless it be infinitely more logical and more purely philosophical than this, must prove utterly abortive. Philosophy must henceforth eschew all authority, all vague hypotheses of an infinite power, and confine itself to reconstructing the world for reason out of the facts of experience as determined by the laws of being. If dogmatic religion desires to find a basis on which it may stand and meet the scrutiny of men, this must be sought in historic evidence and not in philosophy. It is a pity, therefore, that one of the most distinguished of dogmatists has declared that "dogma must conquer history". We fear the victory will be on the other side.

THOMAS DAVIDSON.

VI.—NOTES AND DISCUSSIONS.

THE TWO SCHOOLS OF PSYCHOLOGY.

THE object of the following paper is to inquire whether the difference between the two great Psychological Schools is as wide as has been generally represented and whether some mode of reconciliation (or partial reconciliation) is not possible.

Mill in his *Examination of Hamilton* described the differences between these schools as arising from the adoption of two distinct methods, one proceeding upon introspection of the actual contents of our consciousness, and the other commencing with an inquiry into the origin of our acquired ideas, the original or inexplicable facts of consciousness being on this theory only capable of detection as residual phenomena after all attempts to explain them otherwise have failed. This, he thinks, is the question at issue between Locke and Cousin, whom he puts forward as champions of the rival schools (*Examination of Hamilton*, chap. ix.). He is, I think, in error as to Locke and Cousin; but my present object is not to deal with the history of the question, but to consider it from the philosophical point of view.

Now it seems to me that neither of the methods pointed out by Mill has been or can be dispensed with, and that all that can be said of the two schools is that they have combined them in different proportions. Every philosopher must investigate the actual contents of his present consciousness. If he seeks to derive the notions of Extension or of the External World, for example, from associations between states of a more primitive character, he must commence by several assumptions as to the actual contents of our present consciousness. He must assume that it contains the notion of extension to be explained, and that it contains the several elements from which he proposes to derive it. And if the explanation is to be worth anything he must further ascertain all the leading characteristics of our actual

notion of extension, since if his explanation fails to account for any of these characteristics it is imperfect. He must likewise ascertain all the characteristics of the elements from which he seeks to derive it, otherwise he will be probably found assuming characteristics which they do not possess in order to render his theory more easily applicable. But we have no means of ascertaining what our actual ideas of extension, muscular action, &c., are except what Mill terms introspection; and to introspection, and introspection alone, Mr. Bain accordingly appeals in proof of the several kinds of discriminative sensibility in the muscular sense, which are required for his derivation of the notion of extension.¹ On the other hand no philosopher probably ever maintained that consciousness never undergoes any modification in consequence of association or experience, and that we may safely conclude that the whole of its present actual contents is original. A number of philosophers belonging to the school which Mill terms the Introspective have maintained the Berkeleyan theory of Vision and the Hutchesonian theory of Secondary Desires, both of which suppose that our present consciousness is largely modified by the influence of the Associative principle. Mill's two methods are thus in reality two different parts of the same method. Philosophers of one school may indeed have paid too little attention to questions relating to the origin of our acquired ideas, while their opponents may have neglected to investigate the actual characteristics of our ideas, and may have thus explained not what they undertook to explain but something capable of being mistaken for it. But the actual facts of consciousness can only be explained by, or resolved into, other facts of consciousness, and to the success of every explanation two things are essential—accurate knowledge of what is sought to be explained and accurate knowledge of the facts employed in the explanation; both which items of knowledge can only be derived from introspection. This being laid down in the first instance—and Cousin has laid it down very clearly in the passage referred to by Mill—it may be admitted that the explanation of mental phenomena is a higher aim of science than their mere classification and arrangement, and that every plausible effort at explanation should be favourably received by psychologists, though, owing to the peculiar difficulties of the science, it will generally be entitled in the first instance only to a very qualified acceptance. Let *a*, *b*, *c*, *d*, for instance, be four mental phenomena, of which *d* is really the resultant of the combination *abc*. Here a psychologist of ability will generally be able to give a very plausible explanation of *c*, on the assumption that *a*, *b* and *d* are ultimate, or at all events prior to *c*; and, in the absence of direct

¹ James Mill, who is regarded as one of the champions of the Empirical School, states at the end of his *Analysis of the Phenomena of the Human Mind* that what he has put forward is only *theory* in the original or literal meaning of that word, *viz.*, "viewing or observing and correctly recording the matters observed". Yet in their notes to this work J. S. Mill and Mr. Bain frequently appeal to introspection in order to correct some of his analyses.

evidence as to which of the four states first appeared in consciousness, it may be very difficult to decide between the true theory and the erroneous one.

Passing, therefore, from the difference in method to the difference in results I may remark in the first place that no *a priori* theorist now maintains that we possess knowledge or ideas prior in the order of time to experience. But it is contended that we never find that which is universal and necessary in experience, nor can it be logically deduced from experience, and therefore the universal and necessary must be the result of a mental law. So far, however, there is no difference of opinion between the adherents of the rival schools. Necessity, according to the advocates of the Experience-theory (as it has been called), is not to be found in experience, nor can it be logically inferred from experience, but on the contrary it is always the result of a mental law. But they contend that this mental law may be the law of Inseparable Association—that, through the operation of that law, necessities which did not originally exist in the mind may be generated, and may become binding on all subsequent consciousness as firmly as if they were original. It is evidently erroneous to describe such necessities as derived from experience, though that expression is sometimes carelessly employed. They result from the Laws of Association, which are purely mental laws. They presuppose uniformity in experience, indeed, for without this uniformity the association could not become inseparable; but that is the only sense in which they result from experience.

The Associationist simply lays down these uniformities in our experience as facts which he does not seek to explain, and apparently regards as ultimate. The Kantian, on the other hand, seeks to show, from the nature of our faculty of thought and from its office in the generation of experience, that experience *must* exhibit such uniformities. But here the explanation of the Associationist does not clash with that of the Kantian, except when the former seeks to explain by means of Inseparable Association operating on uniformities of experience the very principles which, according to Kant, introduce all observed uniformities into our experience. And even then the difference is not so wide as might at first appear. If Kant was asked whether *sensations* must exhibit these uniformities he would probably reply in the negative. Why, then, must *experience* exhibit them? Because experience is not a mere aggregate of sensations, but a system of sensations reduced to unity and order. The Associationist might answer, in the first place, I mean by *experience* what you mean by *sensations*; and, in the next place, the reason why experience must (on your system) present uniformities is simply that you have introduced the element of uniformity into your definition of experience.

But what Associationist at the present day would venture to reduce *all* necessities of consciousness to Inseparable Association? No one perhaps ever referred my necessary belief in the existence of my present sensations to that source. It seems to be now generally agreed that the same concession must be made in reference to the

necessary belief in the past existence of what is now represented to me in the act of memory ; and perhaps also to the belief that I who feel the present consciousness am the same person who experienced the past state which I now remember. So of the beliefs, of which I cannot divest myself, that this follows that, that this is simultaneous with that, and that this is like that. Mill would apparently concede the same ultimate necessity to the primary law of thought—the Principle of Contradiction. Original mental necessities must therefore be admitted even when it is denied that necessity is any criterion of originality ; and the problem of ascertaining the number of these original mental necessities, classifying them, and tracing out their consequences, must therefore be regarded as an important one by every cultivator of the science. Moreover it is now maintained in many quarters, following Mr. Herbert Spencer, that the experience and habits of thought of our ancestors for a great number of generations past may be influential in producing mental necessities as well as our own personal experience and habits of thought, in which case the former necessities will evidently be original to the men of the present generation and will exert an influence in their minds from the first. The theory of ancestral experience and association in fact recognises the existence of *a priori* truths and seeks to explain them. If all mental necessities could be explained by inseparable association generated by our own personal experience and habits of thought, the ancestral theory would be wholly out of place. Another explanation, too, of original necessities of thought is offered or rather accepted by Mill in the note to p. 88 of the 4th Edition of his *Examination*.¹ It is that, since the imagination probably employs the organism in its representations, what is originally unrepresentable in consequence of organic laws must be originally unimaginable. This explanation excludes the Association-theory and in fact differs from that of the *a priori* school only in the same way that the theory of Latent Mental Modifications differs from that of Unconscious Modifications of the Nerves or Unconscious Cerebration.

Since the time of Kant many philosophers of the *a priori* school would admit that no synthetical judgments (which alone afford us real information) can be derived from the mere comparison of the thoughts or concepts involved in them and that to perceive their truth a reference must in some way or other be made to the sensibility or faculty of intuition. The judgment or proposition, Two right lines cannot enclose a space, for example, cannot be arrived at by any analysis of the notions of a right line and of the number two. The lines must be drawn in intuition, real or imaginary, before the truth of the judgment is perceived ; and the immediate object of consciousness is always individual. Hence it follows—and is generally conceded—that we do not originally perceive the truth of *a priori* judgments in their general forms but only in particular instances. Instead of perceiving at once that no pair of right lines will enclose a

¹ This explanation was in fact my own suggestion, but I think I may fairly refer to Mill's acceptance of it in the note in question.

space, we perceive that this pair and this pair and this pair will not do so. That necessary truths are thus originally cognised not in their full generality, but in the particulars or rather singulars that come under them, is distinctly maintained, for instance, both by Hamilton and by Mansel. The former is doubtless expressing his own sentiments when he says (*Reid's Works*, p. 177, note): "On the supposition of the mind virtually containing, antecedent to all experience, certain universal principles of knowledge in the form of certain necessities of thinking, still it is only by repeated and comparative experiment that we compass the certainty, on the one hand, that such and such cognitions cannot but be thought, and are therefore, as necessary, native generalities; and on the other that such and such cognitions may or may not be thought, and are therefore, as contingent, factitious generalisations." Again Mansel says (*Prolegomena Logica*, p. 92, Second Edition): "But, granting that thought has its laws, how are these to be discovered? Only by reflection on the phenomena of actual thinking. . . . To learn how we think, we must in the first place actually think; and a multitude of successive acts of thought will be necessary before we become aware that certain conditions are contingent and limited to some of these acts only, and others necessary and present in all." And therefore he proceeds to say that, if experience is taken in a wide sense, all knowledge is derived from experience. Cousin teaches the same doctrine perhaps even more clearly.¹ But how does this differ from the explanation of the Law of Contradiction offered by Mill, namely, that it is "one of our first and most familiar generalisations from experience. The original foundation of it, I take to be, that belief and disbelief are two different mental states, excluding one another. This we know by the simplest observation of our own minds" (*Logic* II. vii. 5)? Both parties admit that as a matter of fact the mental phenomena exhibit the uniformity in question but that to detect it as an uniformity and to express it in general terms, observation of a number of successive mental acts is necessary. Both apparently admit also that this uniformity existed from the first and was observed as soon as our observation took that particular direction: and this being so, the law in question has as good a right to be called a law of mind as gravitation has to be called a law of matter. And in fact, in the mental phenomena it is scarce possible to distinguish between universality and necessity. If we never in fact imagine an exception to a general law of mind, the natural inference is that an exception is unimaginable. Nor is very much added to the weight of the argument by making unsuccessful efforts to imagine an exception. When we try to imagine two right lines enclosing a space, for example,

¹ There are still however many philosophers of the *a priori* school who maintain that we can know (synthetical) properties of objects by means of our ideas or concepts of them. But even in this respect there is a curious approximation between the two schools in what I regard as a common error. For Mill and Mr. Bain admit the alleged fact and offer an explanation of it based on the conditions required for the formation of these ideas or concepts.

and fail in the effort, all that is really proved is that the particular pairs of lines which we imagined would not do so. It is still supposable that among the infinite number of pairs which we are capable of imagining, there is one pair which would enclose a space if we tried it, and the conclusion that no such pair is imaginable is really inductive—an inference from a number of particular instances to the whole class which contains them. That Mill saw the virtual identity of the two theories may I think be inferred from his treatment of the Law of Contradiction in his *Examination of Hamilton*, where its *a priori* character is practically admitted. Mr. Bain here substantially agrees with Mill. The law in question (though in his opinion derived from a higher one) is one of the general results of all human experience—in other words, it is the expression of an uniformity which all human experience exhibits. Hamilton and Mansel would add to this statement “and must exhibit”; but that is the whole difference, if indeed the empiricist would not concede it also.

Very similar is Mill's explanation of why Arithmetical axioms are seen to be true by merely thinking of them—in which case I think Mr. Bain likewise does not differ very widely, though his discussion would have been much improved by an application of the Kantian distinction between analytical and synthetical judgments.¹ These axioms are seen to be true by merely thinking of them because they are laws of *all* numerable things, and mental states are numerable things. Here it is to be observed that these axioms always *were* true of all numerable things though we may not have been always aware of their truth, and likewise that our mental states *were* numerable things from the first though possibly we did not know that they were so. Consequently it never was possible for us to reverse an arithmetical axiom in imagination. To suppose that we could have done so at any time, would be to suppose that at that time the law in question did not extend to all numerable things or else that imaginary objects were not then numerable things. Like the Law of Contradiction, the arithmetical axiom is a generalisation of our mental experience, and the uniformity which it expresses existed in our mental experience from the first. The axiom is, in no intelligible sense, a result of the

¹ The non-recognition of this distinction lies at the root of a large number of metaphysical controversies. How is it possible to know by our concept of a thing any property not comprised in the concept? is a question that in many cases would silence the *a priori* theorist. As to the reply (already alluded to) that we can do so because in forming the concept we have learned the property of the thing by experience, the question at once arises, Is this property included in the concept or is it not? If it is included, the pretended explanation does not account for the alleged fact, namely that we can know by our concept some property of the thing which is *not* so included; but if it is not included, how can we learn the property *from the concept* without any reference to the experience, which may have been requisite for the formation of the concept but constitutes no element of it when formed?

law of inseparable association. That law could only come in, if the axiom was at first limited in its application to the presentations of sense, in which case it might explain how it afterwards came to be extended to the representations of imagination. But according to the explanation which I am now considering, the law was from the first applicable alike to presentations and representations—to sensations and ideas—the latter having always been numerable things as well as the former.

Nor is the empiricist's explanation of Geometrical axioms very dissimilar. Here we are told that the presentations and representations—the sensations and ideas—are exactly alike and that therefore the latter possess all the properties of the former. Two real right lines will not enclose a space. Two imaginary right lines are exactly like the real ones. Therefore they will not enclose a space. I do not find that in this case the resemblance between the real and the imaginary is described as a result of experience and association—as at first feeble and obscure and gaining in clearness and accuracy as we grow older. It is rather described as having existed from the first. If so, it was never possible for us to reverse a geometrical axiom in imagination. From the moment that we first formed the notion of a right line, the imaginary line was like the real one; but a pair of real right lines never would enclose a space and the exact resemblance of the imaginary lines to the real ones deprived them of all space-enclosing power likewise. Here again association is excluded. Our inability to conceive the reverse of a geometrical axiom existed from the first dawn of consciousness. There never was a time at which a pair of right lines enclosing a space was imaginable.

Not merely the Law of Contradiction therefore, but the axioms of Mathematics possess, according to both schools of philosophers (at least as represented by some of their leading exponents), an original necessity independent of association, and exhibiting itself in our experience, or rather consciousness, from our earliest infancy. But we are not at first aware of these mental necessities, and our earliest knowledge of them is not a knowledge of these truths in their general expression, but of the particular, or rather singular, judgments or propositions which come under them. And when the general expression is attained, it always asserts more than is included in the particular instances from which it was derived. It asserts that some property holds good of an entire class of mental states, when in fact it has only been found to hold good of certain members of that class. It is thus an induction, and liable to the doubts and uncertainties attendant on the inductive process in all its applications. Supposable exceptions are not excluded, and the generalisation (like generalisations of the phenomena of the external senses) may be either too wide or too narrow. In the latter case it will indeed be true, though it may not express the whole truth; but in the former it will be false, as asserting of an entire class of mental phenomena some property which is only true of a part of the class—of a sub-class. Such is the theory which, though not in terms advocated by the controversialists on either side, has, I

think, been, if not practically accepted, at least very closely approached by both; and if this theory is accepted, whether the truths in question are to be called *a priori* or *a posteriori* is little better than a dispute about names—a head to which, perhaps, some other disputes between the same schools of philosophy might also be referred. For instance, it is clear that a man born blind can learn to use all the terms expressive of space and its modifications with propriety—that is, as regards their denotations. It seems also certain that Reid's Idomenian (provided he possessed the faculty of speech) could do the same; for even if he was at first deceived by that author's *Geometry of Visibles*,¹ sight (at least if he was carried about) would soon suffice to correct these illusions. The philosopher who derives the idea of space from the muscular sensibility and touch is obliged to admit that there are discriminative sensations of sight corresponding to all varieties of figure, distance, and magnitude. The philosopher who derives the same idea from sight must allow a similar discriminative sensibility to the muscular sense and touch. Does not the point in dispute then reduce itself mainly to the question which of these two sensations (or groups of sensations) is to be called space? There is no doubt a further question, namely, which of them is called space by ordinary men who are capable of acquiring the idea in both ways; but the majority of writers seem to agree that the idea to which the name is usually given is a compound of both, in which, however, the visual element predominates.² Both of these derivations are *a posteriori*; but Hamilton and Platner have attempted to reconcile the sense-perception of space with the *a priori* theory of Kant, while the philosopher of Königsberg himself probably regarded space as an intuition produced in the passive mind by the operation of an independent *thing per se*—a theory which other writers might fairly describe as empirical.

I might pursue the subject somewhat further if I wished; but my object has been not to give a comparative view of two schools of philosophy, signalling their various points of contact, but merely to

¹ Reid's proof of this theory, however, is unsatisfactory, even to those who admit the original perception of extension but not of distance (from the eye) by sight. Take a great circle of the heavenly sphere, of which the observer is in the centre, and since the curvature of the circle is turned towards the spectator, the circular arc will present to the eye the same appearance that would be presented by a right line. Reid hence infers that the arc would be seen as a *right line*. But to say that two things A and B will present the same appearance to the eye is very different from saying that A will appear as B. The appearance presented may well be different from both.

² And does not another well-known controversy turn to a great extent on the question whether a certain mental state is to be called a "concept" or "the connotation of a class-name"? If the latter somewhat cumbrous phrase stands for a mental state, or an element of a mental state, the point in dispute can hardly be regarded as other than verbal. If it does not, what *does* it stand for? Surely it cannot stand for another name.

suggest the question whether they are so irreconcilable either in method or in results as is commonly supposed; and whether the stigma so often affixed to all branches of the science of mind on account of the supposed conflict among its expounders is not greatly exaggerated. Perfect agreement of course is not to be anticipated until the science has made much further progress, but there seems to me to be at present a much larger amount of it than the contending parties are perhaps themselves aware of.

W. H. S. MONCK.

ON THE FUNDAMENTAL DOCTRINES OF DESCARTES.

In Mr. Wallace's recently published book on Kant—which, on the whole, appears to me well and carefully written—I find the following summary (pp. 140-1) of the aims and drift of Cartesianism:

"Descartes, like Bacon, made a protest against scholasticism. But whereas Bacon set on foot a movement outside the boundaries of the school, which grew and increased independently till it came back strong enough to reconstitute philosophy, Descartes was rather an internal reformer who sought to reconstruct the irregular edifice of medievalism on a new principle. That principle was the centrality and priority of thought. A clear and distinct conception was made the certain evidence of reality and truth: *cogito, ergo sum*. Thus the negative criterion, that confusion and indistinctness indicate some error in our ideas, was at one turn translated into the positive canon that whatever we clearly and distinctly think is true. What Descartes no doubt sought was to get rid of the eternal see-saw of argumentation, and to found the ultimate objects of belief on immediate or intuitive perception. We have, he says, certain ideas—notably the idea of God—which are unmistakable, and force themselves upon our thoughts whether we will or not: ideas which we do not voluntarily make, and which are the inevitable issue of our mental constitution; hence, argues Descartes, the objects of these ideas exist independently of our thoughts, of which they so obviously are the masters. It would not be easy to determine how far these metaphysical presumptions are essential to Descartes: they certainly came to be the very essence of Cartesianism. Innate ideas—thoughts which, just because they were universally or generically thought, were treated as evidence of a reality beyond the mind—came to be the recognised creed of the Cartesian school."

This passage is, I think, likely to give the general English reader a seriously inaccurate view of the fundamental doctrines of Descartes; and as the errors and confusions which it tends to suggest or confirm seem to be rather widely current, I should like to take this opportunity of pointing them out. The misapprehensions in question relate to two points in the Cartesian system, which it will be convenient to discuss separately, so far as possible: (1) the importance in the system of Descartes' doctrine as to the origin of ideas, and (2) the nature and extent of the inference drawn by Descartes from the existence of clear and distinct ideas in the mind to the existence of corresponding objects independently of the mind. I will begin with the second point as being both the more important and the more difficult.

Mr. Wallace says that Descartes made a "clear and distinct conception" the "certain evidence of reality and truth"; and that he "sought to found the ultimate objects of belief on immediate and intuitive perception". Interpreting this last sentence by what follows the reader will naturally understand, as the cardinal doctrine of Descartes, that whenever we have clear and distinct conceptions or perceptions we may legitimately infer that corresponding objects exist independently of our thoughts—at any rate if the ideas of such objects "force themselves on our thoughts whether we will or not". And he would certainly find this interpretation of the Cartesian doctrine more or less confirmed by the statements of several other writers. It is not difficult to show that it is an erroneous interpretation: at the same time I must admit that the responsibility for it rests primarily on Descartes himself, who formulated his criterion of truth in the careless phrase "*les choses que nous concevons fort clairement et fort distinctement sont toutes vraies*". Descartes knew as well as any one that truth is an attribute not of "things," strictly speaking, but of judgments or propositions; and if he had only stated explicitly what kinds of propositions "concerning real existence"—to use Locke's phrase—he regarded as guaranteed by his criterion, much confusion might have been prevented. As it is, we have to gather his doctrine on this point from a comparison of various passages of his writings which it is not easy to make altogether consistent. Distinguishing *conception* and *perception*, we have to discover (1) whether Descartes meant that whenever I form a very clear and distinct general conception, I know or may know that a class of objects actually exist as so conceived, independently of my *conception*; and (2) whether he meant that from a clear and distinct *perception* I may similarly infer the existence beyond the mind of a particular object. The second of these propositions is substantially the doctrine of Common Sense (psychological subtleties apart): but the first appears so wild and so gratuitous a paradox that I should hardly have thought of proving that Descartes did not hold it, if something very like it had not been expressly attributed to him by writers of repute. For instance J. S. Mill, giving as a paraphrase of Descartes' "celebrated maxim" (*Logic*, B. V. c. iii. § 3) the proposition "whatever can be very clearly conceived must actually exist—that is if the idea includes existence,"—adds that Descartes "on this ground infers that geometrical figures really exist, because they can be distinctly conceived". In fact, however, Descartes selects this very instance in order to assure his readers that he infers nothing of the kind. "Having observed," he says, "that this great certitude which every one attributes to geometrical demonstrations is founded solely on their being clearly conceived, according to the rule already stated, I observed also that there was nothing at all in them which assured me of the existence of their object; for example, I clearly saw that, supposing a triangle to be given, its three angles must be equal to two right angles, but I did not therefore see anything which could assure me that any triangle actually existed" (*De la Méthode*, iv.). Indeed the whole point of the

ontological argument, in which the existence of God is inferred from the conception, is lost if we vaguely think with Mill that Descartes is prepared to draw a similar inference in the case of finite objects like triangles.

At the same time the statement of Mill above quoted must not be regarded as a quite inexplicable blunder. Its explanation is to be found in a passage in the *Fifth Meditation*, in which Descartes certainly gives geometrical figures as examples of a class of "things which cannot be esteemed pure nonentities, and which are not feigned by me . . . but have true and immutable natures of their own". Thus when I have imagined a triangle, I can demonstrate diverse properties of it, which "whether I will or not, I now clearly discern to belong to it, although I did not think of them when I imagined a triangle, and therefore they cannot be said to have been feigned or invented by me." And not merely of a triangle but of innumerable figures of which I cannot possibly have had scientific experience I can similarly demonstrate diverse properties, "which must certainly be all true since I clearly conceive them; and therefore they are something and not pure nothing: *car il est très-evident que tout ce qui est vrai est quelque chose, la vérité étant une même chose que l'être*". It is this last sentence which has misled Mill, who seems to have failed to catch Descartes' distinction between the "being" thus identified with the truth of geometrical propositions, and the "existence" independent of thought which Descartes expressly abstains from attributing to the geometrical figures. And I am afraid that the distinction has also escaped the attention of Prof. Veitch, in whose excellent translation of the *Meditations* I find "être" in this passage rendered "existence". Indeed the sentence quoted must be admitted to be mysterious and obscure to a plain reader; and probably Descartes felt this, as we find that in the quasi-geometrical demonstration of his main doctrines which forms the termination of his reply to the Second Objections to his *Meditations*, he makes the real meaning of the above sentence more plain in the form of the following axiom:

"Dans l'idée ou le concept de chaque chose, l'existence y est contenue, parceque nous ne pouvons rien concevoir que sous la forme d'une chose qui existe; mais avec cette différence, que dans le concept d'une chose limitée, l'existence possible et contingente est seulement contenue, et dans le concept d'un être souverainement parfait, la parfaite et nécessaire y est comprise."

That is, the criterion of "clear and distinct" conception guarantees the *possible* existence of the object conceived, in the case of finite objects; it guarantees *necessary* existence, in the single case of the Infinite and Perfect Being; but it can never warrant us in concluding that any finite object *actually* exists independently of the mind.

It remains to ask whether, in Descartes' view, this latter conclusion is immediately warranted by clear and distinct *perception* of a particular object—whether I have the same kind and degree of certitude that this paper on which I write *actually* exists beyond *my* mind, as I have that matter generally with spatial attributes *may* exist indepen-

dently of mind. Had Descartes answered this question in the affirmative, his doctrine (as I have said) would be only distinguished by a fine shade from Natural Dualism. But the language of the Third *Meditation* is quite irreconcilable with this interpretation of his view. He there draws a sharp distinction between a natural *inclination* to a certain belief and the *natural light* which makes me know it to be true. I cannot, he says, doubt what the natural light makes me see to be true (as *e.g.*, my own existence or geometrical axioms): but as for mere natural inclinations,—they frequently lead me wrong in action, and I must therefore regard them as untrustworthy guides to belief. And when I say that I am “taught by nature” to refer my ideas of material things to similar objects actually existing without my mind, I merely mean that I have an inclination to believe in the actual existence of such objects, not that their existence is shown to me by the natural light. Hence the actual existence of the individual things that I seem to perceive must be regarded as *prima facie* doubtful; and only capable of being established indirectly by proving the existence of God and relying on the Divine veracity.

The passage just referred to is so clear, and so entirely in harmony with the whole of Descartes’ teaching, that I should have not thought it needful to labour this point, had it not been for a passage in his *Principles* which at first sight appears to suggest a different view. He there says (*Princ.* Pt. II. § 1) that our senses “often stimulate us to *perceive clearly and distinctly* a matter extended in length, breadth, and thickness” &c. If this passage stood alone, I should certainly have understood it to imply that the actual existence without the mind of the particular matter perceived was guaranteed by Descartes’ fundamental criterion. But, as it is, the passage has to be interpreted in the light of the more full and explicit statement in the Third *Meditation*: and when we look closely at it in this light it will, I think, become plain that what Descartes regards as clearly and distinctly apprehended is merely the particular extension of the matter perceived and not its actual existence without the mind. In short, in the *Principles* no less than in the *Meditations* Descartes admits what Kant calls a “problematical Idealism”; only in the later treatise the problem is more swiftly and summarily brought to its realistic solution.

Let us now turn to the question of *origin*. According to Mr. Wallace’s statement, the inference which he describes Descartes as making from the existence of ideas in the mind to the existence of corresponding objects beyond the mind does not appear to be legitimated simply by the criterion of clear and distinct thought; it is dependent on the condition that the ideas in question are “not voluntarily made,” but are “the inevitable issue of our mental constitution”. Now it is true, as we have seen, that the validity of axioms or theorems relating to geometrical figures—as representative of the “true and immutable natures” of such figures—is inferred by Descartes from the fact that the mind finds itself in a manner constrained to conjoin the predicates of such propositions with their subjects; thus it is open to me to abstain from conceiving a triangle, but if I conceive it, I cannot now avoid

seeing, whether I will or no, that its three angles are equal to two right angles. But as I have said, in knowing what is affirmed in such propositions, I know nothing about *actual* existence beyond the mind, I merely know certain universal conditions or laws of *possible* existence. And I do not think that Descartes ever infers either (1) from the innateness or (2) from the involuntariness of any ideas the actual existence of their objects without the mind.

In discussing this it will be convenient to consider each of these two characteristics separately, since, though Mr. Wallace's statement mixes them up in a curious way, they are never so connected by Descartes. In the passage of the Third *Meditation* to which I have already referred he makes a threefold division of ideas in respect of their apparent origin, distinguishing (1) the apparently innate, (2) the apparently adventitious, and (3) those voluntarily invented by myself. The second class, which "seem to come from certain objects without me," are—no less than the innate—independent of my will; and this is undoubtedly a reason which leads me to think that they really do come from external objects like them. But, in Descartes' judgment, it is not an adequate ground for this conclusion: for, as he says, "*peut-être qu'il y a en moi quelque faculté ou puissance propre à produire ces idées sans l'aide d'aucunes choses extérieures, bien qu'elle ne me soit pas encore connue; comme en effet il m'a toujours semblé jusques ici que lorsque je dors elles se forment ainsi en moi sans l'aide des objets qu'elles représentent*". I cannot therefore regard the involuntariness of any of my ideas as proving the existence beyond my mind of objects like them, or even the existence of things different from myself at all.

Does, then, "innateness" furnish such a proof? I cannot see that Descartes anywhere affirms or even implies this. The only *idea*—as distinct from *axiom* or *principle*—that he expressly affirms to be innate is the idea of an Infinite and Perfect Being. But though, in this one case, he certainly believes the actual independent existence of such a being to be demonstrable from what may be known of the origin of the idea, his argument does not rely upon the innateness of this idea, but upon the peculiar impossibility of its being originated by a finite mind (or anything else finite). All ideas that represent modes of finite substances might be involuntarily and unconsciously produced by himself: but the idea of an infinite substance cannot, he thinks, be so produced; nothing can be adequate to produce it except the infinite substance that it represents. Hence in this one case we may argue from the existence of the idea in the mind to the independent existence of its object, as being its only possible cause. He certainly holds the idea to have been implanted by God in creating the mind, since there is no point in the mind's experience at which the idea is suddenly presented from without; but (I repeat) his inference from the idea to the independent reality in no way depends upon the innateness of the former.

Similarly, while holding that various "eternal truths" have their "seat in our thought," and are thus in some sense innate, he nowhere

rests his certitude as to their truth on their innateness. So far from regarding the doctrine of innate ideas or principles as a fundamental part of the Cartesian system, I should be inclined to say, on the contrary, that Descartes' new criterion of certitude has the effect of rendering the question of innateness philosophically unimportant: if the truth of an axiom is adequately guaranteed by the clearness and distinctness with which it is intuitively apprehended, our belief in it needs no further philosophical basis or warrant; it is therefore superfluous to inquire into its innateness. In fact I should say that when Locke declares that "self-evidence does not depend upon innate impressions" but on the perception of the agreement or disagreement of "clear and distinct ideas," he is really availing himself of a position essentially Cartesian to attack a doctrine which Descartes' system certainly retained, but which it could have spared without any sensible loss.

H. SIDGWICK.

THE MNEMONIC LINES OF THE SYLLOGISM.

Well it might be if it were now too late in the career of civilisation to write notes on the above subject. But it would be a mark of the sanguine temperament to think so. Too probably the Mnemonic Lines of the Syllogism will long continue to exemplify the union of vanity with vexation of spirit, and if so, the teacher of Logic will often have occasion to reflect that with all their excellence they are not impeccable. These verses, which embody the names of the legitimate Moods, and signify the processes by which Moods of the 2nd, 3rd, and 4th Figures may be reduced to their equivalents in the 1st Fig., have in fact three conspicuous faults: (1) they provide no means of reminding us, without reciting the whole, to which Figure any Mood belongs; (2) some letters occurring in the names, *viz.*, *l*, *n*, *r*, *t*, have no significance; and (3) there are no names to indicate the direct reduction of *Baroco* and *Bocardo* by means of obversion and contraposition. But happily a few slight alterations will remedy all these shortcomings.

To what Figure any Mood belongs may be shown by inserting in all names of Moods of each Figure an appropriate letter; and neatness would be gained by using for this purpose the four liquids in the order they have in the alphabet; but as *m* already stands for mutation of premisses, this is undesirable. The next suggestion is to utilise the letters *l*, *n*, *r*, *t*, at present occurring in the verses without import; and of course to take them in alphabetical order. Let *l*, then, be the sign of the 1st Fig., *n* of the 2nd, *r* of the 3rd, and *t* of the 4th. Thus the first two imperfections will be rectified at once.

For attempting to form new names instead of *Baroco* and *Bocardo*, such as may indicate their direct reduction by means of obversion and contraposition, there is the authority of Archbishop Whately, who proposed to call them respectively *Fakoro* and *Dokamo*: *F* and *D*

standing (as usual) for reduction to *Ferio* and *Darii*, and *k* for a direction to contraposit the premiss whose sign preceded it. This was a good beginning, but hardly went deeply enough into the subject, and was based upon insufficient analysis. Before hazarding any improvement, however, a remark upon the letter *k* will not be out of place. It is now usually written in *Baroko* and *Bokardo* as the sign of the process called *Reductio ad impossibile*; but whilst the similar signs in other names *s*, *p*, *m*, are initials of the names of the processes they stand for, *k* has an arbitrary air very much out of keeping with the Science of Reasoning. The older Logicians, however, wrote the names of these moods as above, not with *k* but with *c*; because their indirect reduction involves the substitution of the *contradictory* (which begins with *c*) of their respective conclusions for the premisses after whose sign *c* stands. The change of *c* into *k* was perhaps made to avoid confusion with the initial of *Cesare*, &c.; but this seems sufficiently obviated by position; and it will be well to return to the older and more rational practice.

To return to the re-naming of *Baroko* and *Bocardo* with reference to their direct reduction: it may be laid down that it is desirable as much as possible to economise innovation. Now, in the modern treatment of *Baroko* both contraposition and obversion are resorted to, and as neither of these stratagems has a sign in the received lines we seem to want two new letters. Remembering however that contraposition is not a single process, but one consisting of obversion followed by conversion; and that in the reduction of these two Moods the conversion involved is always simple, which already has the sign *s*; we see that the only new sign needed is one for obversion. And examination of the alphabet shows that the only unused letters, practically available are *g*, *k*, and *v*, none of which sounds well with *s*. Indeed *v*, which is most naturally suggestive of obversion, cannot combine with *s* in one of the uses for which we want it. *K* with *s* is not so cacophonious as *g*; so in spite of its strange Russian look, we must adopt it.

The desirability of representing contraposition by the composite sign *ks* is strengthened by a further consideration. In the direct reduction of *Bocardo* thus:—

Some M is not A	} mutating the premisses and contraposing o	{	All M is Z
All M is Z			Some not-A is M
∴ Some Z is not A			∴ Some not-A is Z

it still remains to prove *Some not-A is Z* equivalent to *Some Z is not A*; and this cannot be done by any process given in the books, but must be accomplished by conversion followed by obversion or (as we may call it) Inverse Contraposition, which in the present scheme is readily represented by *sk*. This sign comes of course at the end of a word where *sv* would be unpronounceable.

For *Baroko* then we may write *Faksnoko*; for *Bocardo*, *Doksamrosk*. And inserting the distinctive consonants above assigned to all the Moods of each Figure, and omitting all unmeaning letters, the lines will flow as follows:

Ballala, Celallel, Dalii, Felioque prioris.

Cesane, Camesnes, Fesinon { Banoco
Faksnoko } secundae.

Tertia Darapri, Drisamis, Darisi, Ferapro.

Bocaro
Doksamrosk } Ferisor habet. Quarta insuper addit

Bamatip, Cametes, Dimatis, Fesapto, Fesistot.

If these verses sound ridiculous, it may be remembered that on first acquaintance with the original ones, it needed some awe of the Science of Sciences to induce one to take them seriously. The alliteration perhaps is a little fulsome. But indeed they are not meant for poetry. According to Pope's maxim, "In every work regard the writer's end," they ought to be criticised as a mnemonic. Looked at in that light the chief drawback from the advantages of the above proposal seems to be, that none of the new names has any meaning, except as a mnemonic; whereas a few of the old names were Latin words: but it may be disputed whether that was a mnemonic advantage. And at any rate it seems a sufficient offset to say that there will no longer be as much point as formerly in calling these verses 'barbarous'.

CARVETH READ.

CONDITIONAL PROPOSITIONS.

The usual treatment of Conditional Propositions has several defects. In the first place it overlooks a most important class. The proposition, "He is not a negro and a white," is as truly conditional as the propositions containing the words "if," "or". It asserts that if it be given that he is a negro, it follows that he is not a white, or, if it be given that he is a white, it follows that he is not a negro. It does not assert that he must be the one or the other—he may possibly be a Red Indian. In other words this proposition asserts that the two contained propositions, "He is a negro," "He is a white," cannot at the same time be true, yet that both may at the same time be false. I admit that this can be reduced to two Hypothetical (Conjunctive) propositions. Capability of being reduced to another form ought not however to exclude special treatment, since Disjunctives can be reduced to Conjunctives, and yet they receive special treatment.

Again the usual treatment of Conditional Propositions is in difficulties regarding the meaning of the little word "or" in Disjunctives. Some writers maintain that the alternatives are exclusive, while others maintain that they are unexclusive. "Or" really has the two meanings and both should be taken into account. The necessity of distinguishing at least two kinds of Disjunctives is seen when we try to frame Disjunctive Syllogisms. Thus the *modus ponendo tollens* is valid when the alternatives are exclusive, invalid when the alternatives are unexclusive. Thirdly, we seek in vain in the ordinary text-books the reason of the division of Conditionals into Hypothetical (Conjunc-

tive) and Disjunctive. Moreover, the reason of the rules of these classes of propositions is not given. We are told that Conditionals express some kind of dependence between the contained propositions. Why are there only two kinds of dependence, and what are these two kinds?

These difficulties are avoided if we look upon Conditional Propositions as Categorical propositions which assert that there exists between the parts of the Conditional one of the relations in the scheme of Opposition, *viz.*, Subaltern, Subcontrary, Contradictory, or Contrary. The so-called Hypothetical proposition asserts Subaltern relation between its parts. Subcontrary relation is asserted by unexclusive Disjunctives, Contradictory relation by what are usually called exclusive Disjunctives, and Contrary relation by propositions like that at the beginning of the article. The proposed division would therefore stand thus:—

Conjunctive	.	.	.	.	.	.	.	.	(1)
Disjunctive	{	Unexclusive	.	.	.	.	.	.	(2)
		Exclusive	{ both alternatives cannot be false		.	.	.	(3)	
			{ both alternatives may be false		.	.	.	(4)	

It can easily be seen that this mode of treatment avoids the difficulties above mentioned. Thus, the proposition at the beginning of the article comes under class (4). When “or” is taken exclusively, the proposition will belong to class (3), when unexclusively, the proposition will belong to class (2). Lastly, this scheme gives the rationale of the division and rules of Conditionals by showing the connexion between these propositions and the division and rules of Opposition. A few instances will perhaps make this clear.

“If he is a man, he is an animal.” This means the fact of his being a man includes his being an animal. In other words, the second proposition is included in the first, which is exactly Subaltern relation. Hence we easily see the reason of the rules of these propositions. Affirm the antecedent, or, in other words, the whole, and the consequent, or part, must follow. Deny the consequent, or part, and of course the antecedent or whole is denied.

“He is either black or not black.” This asserts that the two contained propositions, He is black, He is not black, cannot at the same time be true, yet one of them must be true. This is of course contradictory relation, and the reason of the rules of this class of propositions is at once seen.

I may remark, in conclusion, that the Scholastic text-books give this fourfold division, but, as far as I know, they do not explicitly state the connexion between Conditionals and Opposition.

T. B. SCANNELL.

ON THE MOTIVES AND IMPULSES OF THE MIND.

THE causes, subjectively considered, of all the conscious actions of human beings may be summed up under three heads:—(1) Motives, (2) Impulses, and (3) Motives and Impulses together. Thus a man will

sometimes act from impulse without motive, at others from motives without impulse, but usually from motives and impulses together. All the rational actions of human beings must spring from motives, or from impulses conjoined with motives. Other actions are either merely automatic or insane.

It is commonly said that the actions of men are to be regarded as good or bad, as foolish or intelligent, according to the motives which actuate them; that if their motives are morally good, their actions are morally good, and that if their motives are wise their actions are wise. The truth of this may be granted. If, however, we appraise the actions of men, not by a moral and intellectual, but by an utilitarian standard, we shall find that although good actions can result only from good motives, and wise actions from wise motives, useful actions may arise from motives that are not praiseworthy at all. Thus slaves, without any motives to be useful, may do very useful work. So may horses. So may donkeys and dogs. So may steam-engines. Evidently then, although the goodness or badness, the folly or wisdom, of an action is to be estimated by the goodness or badness, the folly or wisdom, of the motives it springs from, its utility or inutility remains the same whether its motives are good or not, or indeed though it should have originated without any rational motives at all.

The word "motive" simply means "that which moves to action". Hence whatever moves a man to any particular action may be called, in an intelligible sense, the motive of that action. It is not usual, however, to call all causes of human actions "motives," but only such causes as move a rational being intentionally to perform them with a view to some definite end.

No action can rightly be called morally good that does not proceed from morally good motives, nor intelligent that does not proceed from intelligent motives; but an action may be useful though it should not proceed from any motives to be useful at all. Convicts, for instance, confined in prisons, do, under compulsion, a great deal of useful work which they certainly would never be led to do by the goodness of their motives. We may be sure, however, of this, that although the utility of a man's actions does not necessarily depend—and fortunately so—on his motives to be useful, the baseness of his actions invariably depends on his motives to be bad. Although bad men, without motives to be useful, may still do works of usefulness, there can be no doubt that with motives in them to be bad, stronger than motives to be good, they are certain, if allowed to have their own way unchecked, to prove themselves not only more useless than useful, but positively detrimental and mischievous in a high degree.

Impulses of the mind are quite as much causes of human actions as are rational motives, but, as has been said, should be carefully distinguished from them. Of course at the bottom of both motives and impulses lies the mind—the personal Self or Ego—that is affected by them, and though its impulses and motives cannot always be separated in fact—as a man in terror may act to some extent from blind impulse, and to some extent also, simultaneously, from reasonable

motives—in thought they should never be confounded. A sudden impulse of the mind, although the mental cause in innumerable cases of human action, is not a motive in the strict and proper sense of the expression. Madmen often act from sudden impulses which have, apparently, no motives combined with them at all; exercising, seemingly, no reflection, however brief, as to what the result of their actions may be. A motive, properly regarded, always implies an object in view—an object sufficient, in the particular case, to account for the action done. It may be a very foolish object—an object which other people's minds would consider very insufficient indeed—and the man who does the action may be one of the silliest of men. In proportion, however, as he acts from motives—with such rational deliberation as he is capable of with a view to the accomplishment of his purposes—and not from the mere, blind, sudden, irrational impulse of the moment, he is permitted to rank as a sane man, even though his intelligence should happen to be of the most meagre and flimsy description.

That a man's motives are the mental causes of a great mass of his actions is abundantly clear; but it is equally clear that they are not the causes of all of them, for impulses undoubtedly are the mental causes of many. In what then consists the distinctive character of motives? I answer in this—in the fact that they are *Thoughts*. Impulses are conduct-influencing emotions; but *motives are conduct-influencing thoughts*. Ask a man why he did this or that deliberate action. I say “deliberate action” to distinguish it from an action done from mere mental impulse. Ask him, in other words, what was his “motive” for it, and, if he tells you truly what it was, he will do so by explaining what was the consideration, the reflection, the deliberation, the reason—in short, what were the *thoughts*—that moved him to do what he did. Ask him, for instance, why he took a walk. If he had any motive for it at all, it was simply a thought, a reason existing in his mind, which induced him to do what he did. Whatever else then motives may be taken to be, they are in all cases thoughts; not all thoughts, but thoughts which direct to action. A slave acts from external compulsion; an impulsive man at times from mere impulse; but a man who acts from motives, pure and simple, acts invariably from causative thoughts—from a train of reasoning, however sound, or however unsound, which leads him to do what he does. Motives, doubtless, may be occasioned by objects without us; but clearly in themselves they are subjective, and belong entirely to the mind. Sudden impulses of the mind, though called motive impulses or emotions, are not motives in the proper sense of the word as a term of science, nor are any automatic and unobserved thoughts. Motives are thoughts which are attended to; thoughts *pro* and *con*, in cases where motives conflict; thoughts, in short, which go to form a judgment, a decision, a bias of the will to a definite line of action. Such are motives—the conduct-influencing thoughts which, to an extent which is incalculable, determine our daily actions. Good motives are simply good thoughts disposing men to good actions, and

bad motives are simply bad thoughts urging them to actions which are mean, base, and ignoble. Thus to effect a change in men's motives is nothing more or less than to get, no matter how, conduct-influencing thoughts into their heads which they did not previously entertain.

JAMES COPNER.

MR. LESLIE STEPHEN ON UTILITARIANISM.

The two great streams of Moral Philosophy which take their rise in very different regions become ultimately convergent. Utilitarianism, directed into wider channels by Mill and Mr. Sidgwick, absorbs the practical maxims consecrated by experience; and the "innate" morality is tending in the direction of the Utilitarian end, when Mr. Spencer lays down that not even "life," apart from happiness, is for itself to be pursued. This confluence is now facilitated by Mr. Stephen's great work which has just appeared.¹

The Utilitarian obtains what he has all along been contending for, when it is conceded that there is "no action which would not become an abominable crime by the simple fact of its entailing such consequences (the perishing of mankind in torture), no crime which would not become an imperative duty if it evaded them" (p. 384); that in extreme circumstances it may be right to "lie and lie like a man". The feud of generations is composed. The representatives of the rival families—each descendant resembling the other more than his own ancestor—may accept the arbitration offered by our author; candidly admitting that there have been errors on both sides, here a theoretical underrating of happiness as an end, and there a practical miscalculation of its means.

Utilitarian may agree with Evolutionist in fostering the valour which "sticks to his post when the post has become useless," the "tenderness for life when the desirability of life has disappeared". Utilitarianism, which exercises its power by delegating it, accepts the evolutionary morality as a vicegerent principle, almost incapable of excess, almost above supervision, in "high collateral glory" with the supreme principle.

More, no doubt, appears to be claimed for the secondary principle by our Evolutionist. But this tinge of Arian heresy will seem much milder when it is observed that the articles from which he principally dissents are no part of utilitarian orthodoxy.

Thus he objects (pp. 358-372): "As we have no more reason for assigning special importance to the judgment of one man than to that of any other or for preferring the estimate of the saint to the estimate of the sinner, the standard which results from the average judgment must be an inferior or debasing standard". But it is no part of the utilitarian first principle that the happiness of each sentient shall 'count for one,' irrespective of that tendency to be reproduced and multiplied and spread which is the attribute of 'refined' pleasures.

¹ *The Science of Ethics* (Smith, Elder, pp. 462), announced in last Number. General review will follow.—ED.

The feeling of the brute, like the opinion of the fool, should count indeed, but count for little.

Again it seems to be somehow assumed that, because the utilitarian end is the maximum aggregate of pleasures of individuals, therefore the individuals must be regarded as tending to this end as "independent atoms". Let us take a physical illustration. Given a system of particles of various masses connected by given massless links. Let the system move under given natural forces from one given position to another by a course or set of paths which it is required to determine, so that the whole aggregate of energy which is formed by putting together the energy which each particle of the system has at each instant of the flight (the *Action*) should be a minimum or maximum. Here is an intelligible problem, one which Nature is continually solving. Because the *propositum* is an aggregate of energies of individual particles, it would be the merest confusion to treat those particles as "uniform atoms" or as "independent atoms".

Nor can the Utilitarian recognise the features of the object of his worship in all that is said about the "assumption of the fixity of human nature," the "wrong assumption as to constants," "the utilitarian criterion rigid and yet indefinitely variable in different directions". The Utilitarian will assume as variable what is proved to be variable and as constant what is proved to be constant; and he will vary the variables, subject to the constancy of the constants, so that the integral of happiness should be the greatest possible.

In fine, grant that the Utilitarian has erroneously treated the social "organism"—losing his end by seeking it too directly; at most, "though he is liable to that error it is an error upon his own principles" (p. 376). Those principles are confirmed as often as these errors are corrected. For neither Mr. Stephen, nor Mr. Spencer, nor any other rational antagonist attempts to cast out Utilitarianism otherwise than in the name of utility. It is the old argument of Wedderburn against Bentham's principle: that it is *dangerous*. You appeal to the authority of Utilitarianism, when you urge the utility of not listening to her. Hers alone of empires cannot be deprived of its dependencies without its central government being recognised. You cannot cut off the branches without supporting yourself by the trunk—

Per damna per cædes ab ipso
Ducit opes animumque ferro.

F. Y. EDGEWORTH.

VII.—NEW BOOKS.

[These Notes do not exclude, when they are not intentionally preliminary to, Critical Notices later on.]

Kant. By WILLIAM WALLACE, M.A., LL.D., Fellow and Tutor of Merton College, Oxford. ("Philosophical Classics for English Readers.") Edinburgh and London: Blackwood, 1882. Pp. 219.

This new volume of the "Philosophical Classics" series goes far to fill a blank that remained after all the Kantian literature that has appeared in this country of late years. It gives an account of Kant's life and personality which is not only very graphic but, considering its length (94 pp.), remarkably complete. For the rest—

"The account of Kant's philosophy is founded directly on his own works. Chapter viii. gives glimpses of his scientific theories; chapter ix. notes the more salient points in his metaphysical views up to 1766; chapter xi. analyses the first quarter of the *Kritik der reinen Vernunft*; chapter xii. sums up the results of the rest of that work; chapter xiii. deals with the first part of the *Kritik der Urtheilskraft*, the second part of which is connected in chapter xiv. with the two chief ethical treatises. The *Prolegomena* and the *Metaphysische Anfangsgründe der Naturwissenschaft* are passed by; the *Religion innerhalb der Grenzen der blossen Vernunft* is briefly alluded to in the life; and the later essays, like the lectures, are only mentioned."

Chapter x., "The Philosophical Environment of Kant," has attention drawn to it elsewhere in the present number. It would be difficult to say how the author could have made better use of the limited space at his command. The frontispiece-portrait is taken from a painting made of Kant at the age of 44.

Political Institutions: Being Part V. of the *Principles of Sociology.*
By HERBERT SPENCER. London: Williams & Norgate, 1882.
Pp. 229-770.

The present Part completes, with *Ceremonial Institutions* published in 1879, Vol. II. of the *Principles of Sociology*. The subject of it lies, in the main, beyond the province of this journal, but its appearance is to be noted as marking another stage in the execution of the author's "System of Philosophy". He finds the phenomena of Evolution with which he here deals to be "above all others obscure and entangled," but in view of his general task, of which much yet remains to be performed, he has had to be content with giving two years to his present treatment of them. The treatment, however, is based upon materials that have been gathered together during the past fourteen years, in the *Descriptive Sociology*.

Essays in Jurisprudence and Ethics. By FREDERICK POLLOCK, M.A., LL.D., late Fellow of Trinity College, Cambridge. London: Macmillan, 1882. Pp. x., 383.

Of the thirteen Essays here brought together (with some additions and re-arrangements) from different journals and reviews, in which they have appeared in the course of the last seven years, four are more specially ethical—"The Casuistry of Common Sense," "Ethics and Morals," "Marcus Aurelius and the Stoic Philosophy" (MIND XIII.), "Mr. Spencer's *Data of Ethics*". In these the author has "endeavoured to bring to a better defined issue certain points of ethical discussion by the help of distinctions founded on familiar legal conceptions and by specifically applying those conceptions and distinctions to admitted facts". In the other Essays, it has been his "aim to consider legal ideas and institutions as affected by or affecting the wider interests of history, politics, and practical legislation". In all he has followed by preference "the historical method".

Evolution, Expression, and Sensation, Cell Life and Pathology. By JOHN CLELAND, M.D., F.R.S., Professor of Anatomy in the University of Glasgow. Glasgow: Macle hose, 1881. Pp. 158.

In acknowledging, at the end of the last No. of MIND, receipt of a small pamphlet entitled *The Relation of Brain to Mind* (Macle hose), the author's name was accidentally omitted. The present volume, published earlier from the same hand, consists of six essays all more or less directed, as is also the pamphlet, to bringing forward certain considerations corrective of current doctrines of life and mind. Evolution proceeds in such a way as to "demand for the universe a background or underlying element of spirit". The Sense of Vision, while its organ is inexplicable by any process of natural selection, implies, like the other senses "an unknowable territory whence, and not from the material world, they take their origin". Sensation or Consciousness, which involves an "impressed condition of brain-substance," "extends from its special seat [in the hemispheres] so far [throughout the body] as there is continuity of the impressed condition". In the pamphlet the author seeks more especially to establish the following positions:—

"The degree of sensation varies according to the amount of the stimulus and the irritability of the nerves and brain, provided always the attention is the same." But "the amount of subsequent mental action set up by sensation has no quantitative relation to the sensation, and therefore none to the amount of energy liberated by the stimulus". "A certain amount of energy in the production of sensation quits the physical for the psychical world, instantaneously to return again in the excitation effected by the sentient mind on the substance of the brain."

On Mr. Spencer's Unification of Knowledge. By MALCOLM GUTHRIE. London: Trübner. Pp. 350.

"This book is an examination of Mr. Spencer's philosophy as presented in the *Principles of Biology* and the *Principles of Psychology*. Ch. I. is to

the effect that Mr. Spencer's works exhibit several different methods for the unification of knowledge which, being inconsistent, are mutually destructive. Ch. II. is a reply to Mr. Spencer's criticism, including a discussion of theories of knowledge. Ch. III. treats of several miscellaneous questions related to the study. Ch. IV. is an examination of Mr. Spencer's mode of affiliation of Psychological evolution upon Evolution in general, showing the want of continuity of the methods proposed. In the last section of this chapter the efficacy of the 'Double-aspect' theory as a means of explanation is discussed; a criticism of the views of Clifford and Bain upon this subject being given in an appendix. Ch. V. is a study of the *Principles of Biology* with regard to its place in Mr. Spencer's system. The deductive method of reconstruction is strictly criticised, and is found to be of value only so far as it is coincident with knowledge arrived at by *à posteriori* methods, and to be of no efficacy in filling up the blanks at present existing in biological science. Various imperfections of logical continuity are pointed out and the methods of affiliation upon evolution in general are condemned."

The Scientific Basis of National Progress, including that of Morality.

By G. GORE, LL.D., F.R.S. London: Williams & Norgate, 1882. Pp. 218.

"The greatest obstacle to the discovery of new knowledge in this country lies in a widespread ignorance of the dependence of human welfare upon scientific research. I propose therefore to show, in a brief manner, that the essential starting-point of human progress lies in scientific discovery; also that new truths are evolved by original research made in accordance with scientific methods; and to illustrate these statements by examples; also to point out how such research can be encouraged. The book is divided into four chapters, *viz.*:—1st, The Scientific Basis of Material Progress; 2nd, The Scientific Basis of Mental and Moral Progress; 3rd, New Truth and its Relation to Human Progress; and 4th, The Promotion of Original Scientific Research."

Outlines of Primitive Belief among the Indo-European Races. By

CHARLES FRANCIS KEARY, M.A. London: Longmans, 1882. Pp. xxi., 533.

"There are two roads along which students are now travelling towards (we may reasonably hope) the same goal of fuller knowledge touching Pre-historic Belief. One way is that of Comparative Mythology. . . . The other method, which is an historical rather than a scientific one, may be called the study of the History of Belief. In it our eyes are for the time being fixed upon a single race of men; and it is the relationship of these people to the world by which they are surrounded that we seek to know." These "outlines of early Aryan belief belong to the class of studies which are distinctly historical in character. They are not designed to establish any new theory of the origin of belief among mankind; nor are they meant to deal with theories which relate to creeds other than the Indo-European. They are essentially a record of facts."

Means for Learning how to Reckon certainly and easily: with the Elementary Ideas of Logic. Posthumous work of MARQUIS DE CONDORCET. Published by his Widow, Mme. de Condorcet. Translated by J. Kaines, D.Sc. London: Reeves & Turner, 1882. Pp. 95.

This little work, composed in Condorcet's last days just before his

tragic end and published afterwards from the leaves he had transmitted one by one to his wife from his hiding-place, consists of two nearly equal parts—(1) twelve short Lessons, expounding the formation of numbers and the four fundamental processes of reckoning; (2) a series of Observations on each lesson for the guidance of teachers, directing them how to give and apply the lessons, and also how to make clear to the youngest comprehension the logical principles involved in the various steps of the processes. The treatise, besides being admirably lucid throughout, is often marked by original insight; and intelligent teachers will thank the translator for making it accessible to them.

Religion and Philosophy in Germany. A Fragment by HEINRICH HEINE. Translated by JOHN SNODGRASS. ("English and Foreign Philosophical Library.") London: Trübner, 1882. Pp. 177.

The sketches here translated first appeared in French in 1833, though they seem to have been originally composed, as they afterwards were also published, in German. The translator has taken the German text as the basis of his version, but notes all changes of importance introduced into the revised French Edition which last left Heine's hands. As an attempt, not without some measure of success, to give English readers an idea of Heine's characteristic style, the translator's work deserves acknowledgment. The sketches, however, written as they were for effect at the time, have hardly such permanent value as very well justifies their admission into the "English and Foreign Philosophical Library".

The Sarva-Darśana-Saṃgraha or Review of the Different Systems of Hindu Philosophy. By MĀDHAVA ĀCHĀRYA. Translated by E. B. Cowell, M.A., Professor of Sanskrit in the University of Cambridge, and A. E. Gough, M.A., Professor of Philosophy in the Presidency College, Calcutta. ("Trübner's Oriental Series.") London: Trübner, 1882. Pp. ix., 281.

The work here translated was first printed in 1858, but had been used in 1828 by Wilson in his "Sketch of the Religious Sects of the Hindus". The author, who flourished in South India in the 14th century, passes in review the sixteen philosophical systems then current, "and gives what appear to him to be their most important tenets, and the principal arguments by which their followers endeavoured to maintain them". "The systems form a gradually ascending scale,—the first, the Chārvāka and Bauddha, being the lowest as the furthest removed from the Vedānta, and the last, the Sāṅkhya and Yoga, being the highest as most nearly approaching it." Prof. Cowell "can hardly imagine a better guide for the European reader who wishes to study any one of these Darśanas in its native authorities".

Théorie des Sciences. Plan de Science intégrale. Par L. BOURDEAU. 2 Tomes. Paris: Germer Baillière, 1882. Pp. xx., 490, 634.

The author of this work essays a task not different from that of Comte in the *Philosophie Positive*, so far as Comte was concerned (as

he was by no means chiefly concerned) to advance knowledge by a systematic consideration of the methods and results of the different lines of scientific inquiry. Having this for his exclusive aim, instead of any moral purpose or any ideal unification of human thought, the author orders the sciences not under the name of Philosophy but of Science in general. The scheme he sets forth is limited to the Speculative (as opposed to Practical) Sciences, and of these to such as are General (as opposed to Particular). General he calls those which are occupied with "aspects" (as distinguished from classes or departments) of things. Comte had the same limitation in view when he set up his hierarchy of the *Abstract* Sciences, and the designation *Abstract* seems decidedly the more appropriate. But the author, if he might better have retained Comte's word, urges forcible objections against Comte's actual classification: as that in putting Mathematics first it does not begin at the beginning; and that it mixes up concrete Sciences such as Astronomy, and (the author adds) Biology and Sociology, with those that are purely Abstract. His own scheme, as worked out in the book, has seven heads:—(1) Positive Ontology or Logic, science of Realities; (2) Metrology or Mathematics, science of Quantities; (3) Dynamic or *La Théseologie*, science of Situations; (4) Physic or *La Poïologie*, science of Modalities; (5) Chemistry or *La Craséologie*, science of Combinations; (6) Morphology, science of Forms; (7) *La Praxéologie*, science of Functions. It will be recognised at once that this scheme (whatever be thought of the author's new coinages) presents in its first and in its last two terms some striking and original features. What he calls Ontology or Logic is intended to supply the great initial omission in Comte's classification. An idea of its scope may be conveyed by quoting its subdivisions:—(A) Analytical, science of the Formation of Ideas, (*a*) Elementary, science of Objective Ideas, (*b*) Special, science of Subjective Ideas; (B) Synthetic, science of the Relations among Ideas, (*a*) Comparative, science of the Association of Ideas, (*b*) General, science of the Identification of Ideas. The Methods of the seven General sciences are thus distinguished: (1)—Intuition, (2) Deduction, (3) Observation, (4) Experiment, (5) Integration, (6) Comparison, (7) Connexion. The book is in every way noteworthy.

Grundzüge der practischen Philosophie. Dictate aus den Vorlesungen von HERMANN LOTZE. Leipzig: Hirzel, 1882. Pp. 84.

The dictated paragraphs which Lotze made the basis of his lectures on Psychology, published at the end of last year (MIND XXV., 154), are now to be followed by the series of corresponding summary statements which he was in the habit of dictating on other subjects to his students. Professor E. Rehnisch of Göttingen is devoting himself to the task of bringing the series out with the utmost care, seeking even to indicate the words in each paragraph on which Lotze used, for clearness, to lay stress as he delivered them. The present issue will be followed within the year by six other pieces, dealing with Philosophy of Religion, Æsthetics, Philosophy of Nature, Metaphysic,

Logie and Encyclopædia of Philosophy, History of Philosophy. There are none of these that will not be welcome, even when they give only in condensed form the ideas which Lotze was able to set forth at length in his published works; but some of them will be more especially valued, as never having been expanded in print. The *Outlines of Practical Philosophy*, including Politics as well as Ethics, are disposed in seven chapters: (1) General Principles, (2) Principles of Action, (3) Freedom of Will, (4) Realisation of Ethical Ideas, (5) Individual Life, (6) Society, (7) The State.

Der Kampf um's Unbewusste. Von O. PLUMACHER. Nebst einem chronologischen Verzeichniss der Hartmann-Literatur als Anhang. Berlin: Duncker (London: Trübner), 1881. Pp. 151.

Eduard von Hartmann. Erinnerungen aus den Jahren 1868-81. Mit Ed. von Hartmann's Portrait. Von C. HEYMONS. Berlin: Duncker (C. Heymons), 1882. Pp. 64.

In the first of these two pieces, Frau Olga Plumacher, who gave the readers of this journal, in No. XIII., a specimen of her powers, when she did battle for the doctrine of her master Hartmann, seeks to appreciate the weight of the varied criticism that has been brought to bear upon his fundamental principle of the All-One unconscious Spirit, as also to show what support it has received in the years since it was enunciated. The Appendix, of some 30 pp., contains a most careful bibliography of all Hartmann's works, with everything having a bearing thereon, from the year 1868. It is remarkable enough evidence of the productive and stimulative activity of a man who is still not more than 40 years old.

The other piece is a gossiping narrative by Hartmann's publisher of their relations with one another from the time of their first common venture in 1868. The worthy publisher discloses, among other business-secrets, the history of the wonderful advertisement-sheets with which it early became his wont to deck out the untiring philosopher's works. There is something of real biographical interest in the account of Hartmann's first wife (d. 1877), who, under her maiden name, A. Taubert, wrote so effectively in his defence and who seems to have exercised no little influence on his manner of writing, if not of thinking.

Abriss der Sprachwissenschaft. Von Dr. H. STEINTHAL, a.o. Professor für allgemeine Sprachwissenschaft an der Universität zu Berlin. Erster Theil: "Die Sprache im Allgemeinen". [Special Title: *Einleitung in die Psychologie u. Sprachwissenschaft.* Zweite mit Zusätzen versehene Auflage.] Berlin: Dümmler, 1881. Pp. xxv., 496.

The *Introduction to Psychology and the Science of Language*, published in 1871 as Part I. of the author's projected general work on the science with which his name is so closely associated, is here brought to a second edition before any other Part has seen the light.

The changes introduced into the body of the new edition leave the original paging untouched, longer additions (amounting in all, however, only to some eight pages) being thrown into an appendix at the end. In one of the supplementary notes, the author professes himself willing to accept Lange's and Wundt's statements of what in this country has been called 'conscious automatism'—meaning thorough-going parallelism (without cross-influence) of the physical and psychical series of processes—as agreeing with the doctrine of brain and mind he had himself put forward and now repeats. In another note, while maintaining the importance of Speech as the distinctive condition of human consciousness, he seeks to connect the rise of the faculty with the assumption of the upright posture and so account for its natural appearance in the course of animal evolution. Special reference is made (in the preface) to Glogau's *Abriss der philosophischen Grundwissenschaften* I. (MIND XX., 588) as having applied the author's ideas, beyond psychology, to the foundation of a theory of knowledge, in a manner which he will take another opportunity of appreciating.

Reflexionen Kants zur kritischen Philosophie. Aus Kants handschriftlichen Aufzeichnungen herausgegeben von BENNO ERDMANN. Erster Band, erstes Heft. *Reflexionen zur Anthropologie.* Leipzig: Fues, 1882. Pp. x., 222.

"This publication is based upon Kant's interleaved copy of Baumgarten's *Metaphysica*, covered with his written notes. The present issue, dealing with the topics, is arranged (pp. 65-222) according to the scheme, of the *Anthropologie*—Sense, Imagination, Understanding, Feeling, Desire; the Character of the Individual, the Sexes, Nations, and the Race. The Editor's General Introduction (pp. 1-34), upon the history of the text, shows how Kant was stirred up by Herder's attack to plan the publication of his lectures on Logic, Metaphysics, Natural Theology, Ethics, Physical Geography, &c., and refers also to the lost polemic drawn from him by Hamann's opposition. The Special Introduction (pp. 37-64) to the present section traces the development of Kant's Anthropological doctrines."

Vom phantastischen Pessimismus zum freudigen Realismus: Schopenhauer und Spinoza. Von Dr. KLENCKE. [Two tracts bound together: (1) *Pessimismus und Schopenhauer mit Bezug auf Spinoza als Heilmittel des Pessimismus.* Pp. 45; (2) *Spinoza mit Rücksicht auf Kant, Schopenhauer, Göthe und die moderne Naturwissenschaft.* Pp. 45.] Leipzig, n.d. [1881-2.]

Dr. Klencke begins with a vigorous picture of the pessimistic tendencies of modern Germany; there is one trait in this, "ein unzähliges, den Schweiss des Volkes verschlingendes Heer," which may be recommended to our recent amateur conscription-mongers. He regards the philosophy of despair as a real danger to European culture which must be attacked by sharp and serious criticism. Of this he gives a foretaste by describing Schopenhauer's view of the world as Goethe *minus* Love, and Kant *minus* Duty. After a general sketch of Schopenhauer's life and philosophy Dr. Klencke points out that,

while superficial points of agreement may easily be found in Schopenhauer and Spinoza, the ultimate ground of things and aim of knowledge is for Schopenhauer "das grosse Urnichts," for Spinoza "das selige Aufgehen in Gott". Schopenhauer quarrels with the world and rejects the world and life together. Spinoza, thinking not much better than Schopenhauer of the common pleasures and ambitions of life, yet holds that a good life, nay the life eternal, is possible without abjuring one's individual existence; a life which may be in the world but is not of it. And Dr. Klencke, though he makes larger concessions to Schopenhauer's belief in the general badness of mankind than seem at all needful, adopts Spinoza's view with decided and even enthusiastic preference. Life is a battle, but with something worth fighting for at the end of it; the kingdom to be won is not of death, as Schopenhauer would have it, but of life.

Thus far the first of the two tracts. The second gives a concise and on the whole an accurate summary of Spinoza's philosophy, with special regard to its practical bearings. It is not free from the common fault of laying too much weight on the purely formal parts of the system, but the exposition is always clear and careful, and shows that Dr. Klencke has really faced the difficult points. For example the importance of Spinoza's *idea ideae* in his psychology and ethics is rightly seen and maintained. Though he criticises various details of Spinoza's work, Dr. Klencke finally declares himself a monist; we should say perhaps a phenomenalist-monist, if the combination be allowable, for he seems to go along with several modern authors in considering the abolition of the *Ding an sich* a legitimate and necessary consequence of the critical philosophy. The essay contains many acute observations, and some ingenious translations of Spinoza's ideas into the language of modern science and art; but the promise of the title-page remains unfulfilled, for it leads us to expect a discussion of Spinoza's relations to Kant, Schopenhauer, Goethe, and modern scientific thought in general, and on these matters we get nothing but incidental hints. Dr. Klencke seems to have conceived a good deal more than he has found an opportunity to execute. For the rest, he writes well and sometimes brilliantly. It is to be regretted that the printer has disfigured his pages by a swarm of errors which the most ordinary attention on the part of the reader for the press would have removed. "Dos" for "das," "nom" for "nam," and "Spionza" for "Spinoza," go beyond the bounds of excusable oversight.

[F. P.]

BENEDICTI DE SPINOZA *opera quotquot reperta sunt*. Recognoverunt J. VAN VLOTEN et J. P. N. LAND. Volumen prius. Hagae Comitum, apud Martinum Nijhoff. 1882. 8vo, pp. xii, 630.

This is the first volume of what will henceforth be the standard edition of Spinoza, produced for the Spinoza Memorial Committee in Holland under the direction of Dr. Van Vloten and Professor Land. Both these scholars have long been familiar with Spinoza, and Prof. Land in particular has in the last few years prepared the way for this

edition by a series of critical studies. It may be a surprise to those who have not given special attention to the matter to hear that Spinoza's works were in sore need of critical editing; yet such is the fact. His writings were published in the first instance under circumstances unfavourable to accuracy. Modern editors have troubled themselves but little about the text, and the result is that the errors of the original editions, together with many others due to the careless printing of Paulus's edition of 1802, have gone on uncorrected to this day. The latest edition by Dr. Ginsberg, which professed to be an improvement on Bruder's, is the worst printed of all. Bruder's edition is the one generally used, and is a very good and useful piece of work in other respects; but the state of the text, for the reasons mentioned, leaves much to desire. Likewise no existing edition is complete. Bruder's, even if we call in aid Dr. Van Vloten's supplementary volume of 1862, leaves out various fragments of Spinoza which were or might have been known to exist in one or another place, but had fallen out of sight. Thus Dr. Van Vloten and Prof. Land found before them a very different task from that of a mere reprint. We have every reason to be confident that it will be carried out with that thoroughness which leaves nothing unfinished or in need of correction. For the first time a full and careful collation of the original editions of Spinoza's works has been made, with the incidental result of one or two bibliographical discoveries; and for the first time the student may now read Spinoza without having his eyes offended and his thought distracted by flagrant errors in the text. The present volume contains the principal works, namely the essay *De Intellectus Emendatione*, the *Ethica*, the *Tractatus Politicus*, and the *Tractatus Theologico-politicus*. It is obviously more convenient to have these in one volume than to separate them by adopting a chronological order, and only an extreme bibliographical purist could object to the course that has been taken. It would be desirable, however, to have as part of this edition a little more in the way of critical prolegomena; the reader should have the means of seeing at a glance what is known about the dates of composition and publication of Spinoza's several works. We hope this may yet be supplied in the second volume. As for the mechanical production of the book (which is printed in old-fashioned type so as to have a certain seventeenth-century air), it is in every way excellent. The volume still to come will contain, in addition to the remaining works of Spinoza, reproductions of all the portraits whose claims to authenticity deserve attention.

[F. P.]

VIII.—MISCELLANEOUS.

PROFESSOR THOMAS HILL GREEN of Oxford, who, since January last, has been developing in these pages a philosophical argument of characteristic closeness and force (not to have been completed before October), died after a short illness on March 26th in his forty-sixth year. For some time past his health had been giving cause for anxiety, but no such sudden termination of his labours was anticipated. He was born, on April 7th, 1836, at Birkin near Pontefract in Yorkshire, where his father, the Rev. Valentine Green (of a Leicestershire family), was Rector for many years; his mother, Anne Vaughan, was daughter of the Rev. Thomas Vaughan of Leicester. From Rugby, where he had his schooling, he passed to Balliol College, Oxford, of which he became Fellow, after taking his bachelor's degree in 1859. Appointed Ethical Lecturer at Balliol in 1866, and afterwards Tutor, he continued thenceforth to be mainly occupied with academic work, but acted for a short time as a special inspector under the Endowed Schools Commission. He resigned his tutorship after being elected Whyte's Professor of Moral Philosophy in 1878. His public authorship commenced with an article on "The Philosophy of Aristotle" in the *North British Review* for September, 1866, followed by another on "Popular Philosophy in its relations to Life" in March, 1868. The edition of Hume's *Treatise on Human Nature*, to the two divisions of which he contributed elaborate introductions which would have filled by themselves a considerable volume, appeared in 1874. The destructive criticism which he then brought to bear upon the movement of English philosophy from Locke to Hume, it was not obscurely hinted, was really meant to extend to the related way of thinking of Mill and others in the present generation; but three years afterwards he came more directly face to face with the later bearers of the English tradition, in a series of three articles on "Mr. Herbert Spencer and Mr. G. H. Lewes: Their Application of the Doctrine of Evolution to Thought" which appeared in the *Contemporary Review* between December, 1877 and July, 1878. In the last years he has been engaged on the work, *Prolegomena to Ethics*, of which the papers that have appeared this year in MIND form part and to which reference is made at p. 348 above.

It is some consolation amid the profound regret for his untimely fate, which is shared with his own attached friends by all who care for serious philosophical thinking in this country, that he has not been struck down before nearly completing a book in which (to judge by the published specimens of it) he has been able to give adequate *positive* expression to the ideas that have governed the imposing protest of his life against the conditions under which the English mind has commonly been content to speculate. Later on, when his thought is fully before the world, will be the time to consider what is the lesson (as lesson there is) to be learnt from his teaching—

to be learnt and not afterwards forgotten. Here it is simply noted that one of the deepest thinkers of his time has fallen out of the line of march, when he should have been seen at the front for many years to come; and from the sphere of practical endeavour there has vanished an earnest and noble spirit, devoted, as thinker of his speculative power has rarely been, to the active service of his fellow-men.

The other loss of the quarter has been recorded in every civilised tongue. The main facts of Darwin's life are now so well known that they hardly need repeating here:—that he was born at Shrewsbury, February 12th, 1809, the grandson of Erasmus Darwin and son of Dr. R. W. Darwin, a physician and Fellow of the Royal Society, his mother being daughter of Josiah Wedgwood of Potteries fame; that he was educated at Shrewsbury School, and after beginning a course of medical study at Edinburgh in 1825-6, removed to Christ's College, Cambridge, with some view of entering the Church, but with the effect of having the spirit of the naturalist awakened within him; that after returning from his three years' voyage in the 'Beagle' (begun in December, 1831) he married (in 1837), and finally settled at Down in Kent in 1842, to devote himself ever afterwards to the elaboration, by the most minute and varied research, of the ideas regarding the evolution and development of life that had begun to dawn upon him in the earlier years. The epoch-making *Origin of Species* appeared in 1859, followed by *Animals and Plants under Domestication* (including the hypothesis of Pangenesis) in 1868, *The Descent of Man* in 1871, and the *The Expression of the Emotions* in 1872—to mention only those of his works that have a more immediate bearing on the problems of mental life.

There is that in human knowledge and in human action which will for ever make a "Science of Man" impossible, in the sense that no investigation of mind in the way of positive science can of itself supply that ultimate interpretation of experience which must retain the name of Philosophy. The great scientific genius who has just been arrested in the work he was continuing at the age of 74, was not a philosopher as every generation has need of such to probe the foundations and direct the issues of its thought. He was not even a psychologist as the present age is not devoid of such, at once impelled and able to apply the new scientific principle of Evolution to the disentangling of the whole complex web of mental processes. But as, by the patient labour of a career prolonged to its natural term, he has transformed in his time the Science of Life, he has no less transformed, or forced to be transformed, the Science of Man also; and thereby has altered the whole complexion and range of that experience which the philosopher has to interpret. Nor should it be forgotten that particular questions of psychological science have been treated by him, in whatever unstudied terms, with a tact and insight all his own. It is by nothing short of a kind of unerring instinct that he has unravelled, for example, the question of Instinct itself in the famous chapter viii. of *The Origin of Species*. The

readers of MIND will remember the "Biographical Sketch of an Infant" which he contributed to No. VII.: how impossible it was for him to touch any subject and leave it as it stood, has been proved by the amount of inquiry into the mental life of children since evoked by his example. The simplicity and beauty of character joined with his supreme scientific power will pass into a proverb.

It has been resolved to erect a tablet in Balliol College Chapel as a memorial of Professor Green, and also, in consideration of his public spirit as an Oxford citizen, to found in connexion with the Oxford High School for Boys, of which he was a warm supporter, two Exhibitions for pupils proceeding to the Universities; one of two already founded having been given by himself. There will thus be one Exhibition, tenable for four years, open annually to competition. Contributions may be sent to J. L. Strachan-Davidson, Balliol College, Oxford; or C. A. Fyffe, Lancaster House, Savoy, London, W.C.; or J. J. Bickerton, Town Hall, Oxford.

Owing to Prof. Green's death, the English translation of Lotze's *System der Philosophie (Logik und Metaphysik)* will not appear before next year at the earliest. It will now be superintended by Mr. B. Bosanquet.

A collection of Essays by different writers dealing with current philosophical questions will appear shortly under the editorship of Mr. Andrew Seth and Mr. R. B. Haldane. The Essayists agree in attaching much importance to the special critical standpoint of Kant and Hegel and their recent English exponents, but do not see their way to accepting the systematic doctrines which are associated with it. The volume will consist of a series of attempts to apply critical principles to the detailed treatment of definite problems connected with the special sciences. It will be dedicated to the memory of Professor Green.

A new volume of "Bohn's Philosophical Library" is expected to appear in the autumn from the pen of Mr. E. Belfort Bax. It will consist of an Introduction comprising a biography of Kant and a chapter treating of Kant's place in the history of philosophy (with especial reference to the ontological problem) and influence on 19th century thought in general, followed by Translations of the *Prolegomena* and the *Metaphysische Anfangsgründe der Naturwissenschaft*. The last-mentioned work has not before been translated into English.

Dr. Thomas Maguire, author of an *Essay on the Platonic Idea, Essays on the Platonic Ethics, &c.*, has been appointed to succeed Mr. W. H. S. Monck as Professor of Moral Philosophy in Trinity College, Dublin.

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. XV. No. 4. J. Watson—The Critical Philosophy in its relations to Realism and Sensationalism. J. Royce—Kant's Relations to Modern Philosophic Progress. L. F. Ward—Kant's Antinomies in the light of Modern Science. Hegel—On the

Absolute Religion (trans.). W. T. Harris—Kant's Refutation of the Ontological Proof of the Existence of God. Notes and Discussions, &c. Index to the Contents of the entire Fifteen Volumes of *The Journal of Spec. Phil.*

REVUE PHILOSOPHIQUE.—VII^{me} Année, No. 4. G. Séailles—Les méthodes psychologiques et la psychologie expérimentale d'après les travaux récents de M. Wundt. H. Joly—Psychologie des grands hommes (i.). Ch. Secrétan—Du principe de la morale (fin). Analyses et Comptes-rendus (E. Gurney, *The Power of Sound*, &c.). Rev. des Périod. Correspondance (E. v. Hartmann; F. Bonatelli). No. 5. J. Delboeuf—Déterminisme et liberté (i.). F. Paulhan—La renaissance du matérialisme. P. Tannery—Anaximandre: L'infini, l'évolution et l'entropie. Notes et Documents (Wundt—Sur la mesure des faits psychiques; Trautscholdt—Recherches expérimentales sur l'association). Analyses et Comptes-rendus. Notices bibliographiques. No. 6. A. Espinas—Les études sociologiques en France. i. Les colonies animales. J. Delboeuf—Déterminisme et liberté (ii.). F. Paulhan—Les variations de la personnalité à l'état normal. Notes et Documents (Th. Bernard—Sur quelques illusions optiques de mouvement). Analyses et Comptes-rendus. Rev. des Périod.

LA CRITIQUE PHILOSOPHIQUE.—XI^{me} Année, Nos. 1-17. W. James—Action reflexe et théisme (1). C. Renouvier—La *Philosophie de la Réflexion* de M. Shadworth H. Hodgson (2, 4, 11—a series of extracts from Mr. Hodgson's book, with introductory remarks); la physique de Descartes et la physique de Newton (6); *Descartes*, par L. Liard (10, 13); Les sept énigmes du monde de M. du Bois-Reymond (12, 17); Socrate et notre temps (14). Sh. H. Hodgson—Réponses aux notes de M. Renouvier sur mon examen de ses *Essais de critique générale* (16).

ZEITSCHRIFT FÜR PHILOSOPHIE, &c.—Bd. LXXX. Heft 2. J. Kreyenbühl—Die Teleologie als Weltanschauung (i.). H. Siebeck—Der Begriff des Bewusstseins in der alten Philosophie. J. L. Koch—Der menschliche Geist u. seine Freiheit. M. Eisler—Die Quellen des Spinozistischen Systems. Recensionen.

PHILOSOPHISCHE MONATSHEFTE.—Bd. XVIII. Heft 4. P. Natorp—Galilei als Philosoph. Recensionen u. Anzeigen. Literaturbericht. Bibliographie, &c. Heft 5. J. Baumann—Zwei Beiträge zum Verständniss Kant's. Recensionen u. Anzeigen. Literaturbericht. Bibliographie, &c.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE.—Bd. VI. Heft 2. R. v. Schubert—Ueber den Begriff des Seins mit besonderer Berücksichtigung Beneke's. G. Heymans—Die Methode der Ethik (ii.). E. Laas—Vergeltung u. Zurechnung (iv.). Anzeigen. Selbstanzeigen, &c.

Other Books, &c., received :—L. Stephen, *The Science of Ethics*, London (Smith, Elder), pp. 462. Hon. R. Noel, *A Philosophy of Immortality*, London (Harrison), pp. 202. R. F. Burton, *A Glance at the Passion-Play*, London (Harrison), pp. 168. S. S. Hennell, *Comparative Ethics*, Pt. II., London (Trübner), pp. 223-88. H. McColl, *The Growth and Use of a Symbolical Language* (Rep. from *Memoirs of Manch. Lit. and Phil. Soc.*, 1880-1), pp. 225-48. G. B. Kitson, *A New Page of External Evidence of Supernatural Revelation*, London (Virtue), pp. 45. F. Sewall, *The New Ethics*, New York (Putnam), pp. 61. F. L. Soldan, *The Century and the School*, Salem, Ohio, pp. 16. G. Vadalà-Papale, *Morale e Diritto nella Vita*, Napoli (Gennaro de Angelis), pp. 311; *Il Codice Civile Italiano*, I., Napoli (Morano), 118. A. Angiulli, *La Pedagogia, Lo Stato e la Famiglia*, Sec. Ed. riv., Napoli (Sommella), pp. 107.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.



I.—SCIENTIFIC PHILOSOPHY : A THEORY OF HUMAN KNOWLEDGE.

I.

IN the Preface to the Second Edition of the *Critique of Pure Reason*, Kant has this remarkable passage :—

“It has hitherto been assumed that our cognition must conform to the objects ; but all attempts to ascertain anything about these *à priori*, by means of conceptions, and thus to extend the range of our knowledge, have been rendered abortive by this assumption. Let us then make the experiment whether we may not be more successful in metaphysics, if we assume that the objects must conform to our cognition. . . . We here propose to do just what Copernicus did in attempting to explain the celestial movements. When he found that he could make no progress by assuming that all the heavenly bodies revolved around the spectator, he reversed the process, and tried the experiment of assuming that the spectator revolved, while the stars remained at rest. We may make the same experiment with regard to the intuition of objects. If the intuition must conform to the nature of the objects, I do not see how we can know anything of them *à priori*. If, on the other hand, the object conforms to the nature of our faculty of intuition, I can then easily conceive the possibility of such an *à priori* knowledge. . . . This attempt to introduce a complete revolution in the procedure of metaphysics, after the example of the geometers, and natural philosophers, constitutes the aim of the Critique of Pure Speculative Reason.”

Lange, in his *History of Materialism* (II. 156), thus alludes

to the foregoing passage, and correctly states the conclusions logically deducible from it :

" Kant himself was very far from comparing himself with Kepler ; but he made another comparison that is more significant and appropriate. He compared his achievement with that of Copernicus. But this achievement consisted in this, that he reversed the previous standpoint of metaphysics. Copernicus dared, 'by a paradoxical but yet true method,' to seek the observed motions, not in the heavenly bodies, but in their observers. Not less 'paradoxical' must it appear to the sluggish mind of man, when Kant lightly and certainly *overturns our collective experience, with all the historical and exact sciences [the italics are ours]*, by the simple assumption that our notions do not regulate themselves according to things, but things according to our notions. It follows immediately from this that the objects of experience altogether are only *our* objects ; that the whole objective world is, in a word, not absolute objectivity, but only objectivity for man and any similarly organised beings, while, behind the phenomenal world, the absolute nature of things, the 'thing-in-itself,' is veiled in impenetrable darkness."

Now when the great Kant, whose towering and consummate genius there is no one to dispute, founded the Critical Philosophy on this cardinal doctrine that "things conform to cognition, not cognition to things," and when he claimed thereby to have created a mighty "revolution" in philosophy comparable only with that of Copernicus in astronomy, did he really occupy a new philosophical standpoint, or really adopt a new philosophical method ?

No. On the contrary, he merely completed, organised, and formulated the veritable revolution which was initiated in the latter half of the eleventh century by Roscellinus the Nominalist, —which was condemned in his person by the Realist Council of Soissons, revived in the fourteenth century by William of Occam, and finally made triumphant in philosophy towards the end of the fifteenth century, not so much by the inherent strength of Nominalism as by the weakness of its expiring rival, Scholastic Realism.

The essence of Nominalism was the doctrine that universals, or terms denoting genera and species, correspond to nothing really existent outside of the mind, but are either mere empty names (Extreme Nominalism) or names denoting mere subjective concepts (Moderate Nominalism or Conceptualism). Nominalism distinctly anticipated the Critical Philosophy in referring the source of all general conceptions (and thereby of all human knowledge), not to the object alone or to the object and subject together, but to the subject alone ; it distinctly anticipated the doctrine that "things conform to cognition, not cognition to things". Since genera and species are classifications of things based on their supposed resemblances and differences, the denial of all objective reality to genera and species is the denial of all

objective reality to the supposed resemblances and differences of things themselves; the denial of all knowledge of the relations of objects is the denial of all knowledge of the objects related; and this denial is tantamount to the assertion that things-in-themselves are utterly unknown.

Wrapped up in the essential doctrine of Nominalism, therefore, was the doctrine that things-in-themselves are utterly unknown; that the knowledge of their supposed resemblances and differences is derived only from the supposing mind; that "things conform to cognition, not cognition to things"; in short, that the only knowledge possible to man is the knowledge of the *à priori* constitution of his own mind, and the relations which it imposes upon things (if they exist), totally irrespective of what things really are.

Nothing can be plainer, then, than that the Critical Philosophy did but logically develop the prime tenet of Nominalism, formulate it successfully, and expand it to a self-consistent philosophical system. This, and this alone, was the true merit of Kant. The "revolution" by which philosophy was made to transfer its fundamental standpoint from the world of things to the world of thought, and in consequence of which modern philosophy in both its great schools has inherited an irresistible tendency towards Idealism, had been substantially effected and definitely established some four hundred years before. Kant did but bring to flower and fruitage the seed sown by Roscellinus, and his Critical Philosophy was only the logical evolution and outcome of Mediæval Nominalism.

By Kant's masterly development of Nominalism into a great philosophical system, it has exercised upon subsequent speculation a constantly increasing power. In truth, all modern philosophy, by tacit agreement, rests upon the Nominalistic theory of universals. Hence alone can be explained the fact, so patent and so striking, yet so little understood or even inquired into, that both the great schools of modern philosophy, the Transcendental and the Associational, equally exhibit in its full force the tendency to Idealism latent in that theory. Nominalism logically reduces all experience, actual or possible, to a mere subjective affection of the individual Ego, and does not permit even the Ego to know itself as a noumenon. The historical development of the Critical Philosophy into the subjective idealism of Fichte, the objective idealism of Schelling, and the absolute idealism of Hegel, only shows how impossible it is for that philosophy to overstep the magic circle of Egoism with which Nominalism logically environed itself. No less striking is the inability of the English school to escape from the idealistic

tendencies inherent in its purely subjective principle of Association—one of the innumerable *aliases* by which Nominalism eludes detection at the bar of contemporary thought; for Locke's successors, Berkeley, Hume, Hartley, the Mills, Bain, Spencer, and others, drift towards Idealism as steadily as Kant and his successors. It is, in fact, logically impossible to draw any but idealistic conclusions from the premisses of Nominalism—and those, too, idealistic conclusions which can not stop short of absolute Solipsism.

That modern philosophy in both its great branches irresistibly tends to Idealism is a position that will scarcely be disputed. Dr. Krauth, in his admirable edition of Berkeley's *Principles of Human Knowledge* (p. 122), thus sums up the grounds of this general and admitted tendency, while yet not perceiving that in the last analysis they are all reducible to the almost universal acceptance of the Nominalistic view of genera and species, with its implied negation of the objectivity of relations:—

"It (Idealism) rests on *generally* recognised principles in regard to consciousness. Its definition of consciousness is the one most widely received: the mind's recognition of its own conditions. It maintains that the cognitions of consciousness are absolute and infallible, and that nothing but these is, in their *degree*, knowledge. In all these postulates the great mass of thinkers agree with Idealism. The foundation of Idealism is the common foundation of nearly all the developed philosophical thinking of all schools. Idealism declares that, while consciousness is infallible, our interpretations of it, on which we base *inferences*, may be incorrect; and nearly all thinkers of all schools agree with Idealism here. No inference, or class of inferences, in which a mistake ever occurs is a basis of positive knowledge. Hence, says Idealism, only that which is directly in consciousness is positively known, and nothing is directly in consciousness but the mind's own states. Therefore we *know* nothing more. So completely has this general conviction taken possession of the philosophical mind, that even antagonists of Idealism, who would cut *it* up by the roots if they could cut *this* up, have not pretended that it could be done." (The italics are all Dr. Krauth's.)

The "strength of Idealism," thus described by Dr. Krauth, is the strength of Nominalism—no more, no less. If all the general and special relations of things, conceived by the mind and expressed by general terms, exist in the mind alone, nothing is known of things themselves; for knowledge of things is knowledge of their relations. Nominalism, therefore, is the original source of the definition of knowledge adopted by Idealism, as shown above: that is, the contents of consciousness alone. Inasmuch, moreover, as the notion of a *common* consciousness is itself a general notion, and consequently destitute of all objectivity, nothing is "knowledge," so defined, that is outside of the *individual* consciousness. Beginning with Nominalism, therefore, Idealism must end in Solipsism, on

penalty of stultifying itself by arbitrary self-contradiction. This was the path marked out for the Critical Philosophy by inexorable logic, and Fichte was more Kantian than Kant himself when he resolutely pursued it. Solipsism is the very *reductio ad absurdum* of Idealism, yet it is the rigorously logical consequence of its own definition of knowledge, which again is the rigorously logical consequence of the Nominalistic view of universals. On this point, a further quotation from Dr. Krauth will be extremely pertinent:—

“While Idealism has here a speculative strength, which it is not wise to ignore, it is not without its weakness, even at this very point, for its history shows that it is rarely willing to stand unreservedly by the results of its own principle as regards consciousness. If it accept only the direct and infallible knowledge supplied in consciousness, it has no common ground left but this—that there is the one train of ideas, which passes in the consciousness of a particular individual. A consistent Idealist can claim to know no more than this—that there exist ideas in his consciousness. He cannot know that he has a substantial personal existence, or that there is any other being, finite or infinite, beside himself. And as many Idealists are not satisfied with maintaining that we do not know that there is an external world, but go further, and declare that we know that there is not an external world, they must for consistency’s sake hold that an Idealist knows that there is nothing, thing or person, beside himself. Solipsism, or absolute Egoism, with the exclusion of proper personality, is the logic of Idealism, if the inferential be excluded. But if *inference*, in any degree whatever, be allowed, not only would the natural logic and natural inference of most men sweep away Idealism, but its own principle of knowledge is subverted by the terms of the supposition. Idealism stands or falls by the principle that *no inference is knowledge*. We may reach inferences by knowledge, but we can never reach knowledge by inference” (p. 123).

Against both schools of modern philosophy, therefore, committed as they both are to the definition of knowledge drawn from Nominalism and ending in Solipsism, the charge of logical inconsistency and self-contradiction may be fairly brought, just so far as they hesitate to follow up the path to cloudland which begins with that definition. But any philosophy which hesitates to be logical forfeits all claim to the respectful consideration of mankind.

The great Roscellino-Kantian “revolution” by which Nominalism was made to supplant Scholastic Realism, and philosophy to transfer its fundamental standpoint from the world of things to the world of thought, was a revolution which logically contracts “human knowledge” to the petty dimensions of individual self-consciousness—renders it valueless as to things themselves and valuable only as to the *à priori* constitution of the individual’s own mind—and in effect reduces it to a grand hallucination. Like the French Revolution, the Nominalistic revolution can live only by the guillotine, and decapitates every perception

which pretends to bring to the miserable solipsist, shut up in the prison of his own consciousness, the slightest information as to the great outside world. Defining knowledge as the mere contents of consciousness, it relegates to non-entity, as pseudo-knowledge, whatever claims to be more than that. Under its sway, philosophy is blind to the race, and beholds the individual alone. What wonder that, in the hands of those who insist on their rights to reduce theory to practice, philosophy is so often found pandering to the moral lawlessness of an Individualism that sets mere personal opinion above the supreme ethical sanctities of the universe? In human society, individual autonomy is universal antinomy; for the law that binds only one binds none. Yet, with Nominalism for its root, Idealism for its flower, and Solipsism for its fruit, how can modern philosophy, teaching in both its great schools that the individual mind knows nothing except the states of its own consciousness, discover any law that shall have recognised authority over all consciousness? For such a discovery it is hopelessly incompetent. So far, therefore, as the social and moral interests of mankind are concerned, the present philosophical situation has become simply intolerable.

Fortunately for the future of society, however, the principle of cognition embodied in the Nominalistic definition of knowledge has never obtained general assent outside of the circle of purely speculative thought. The protest of "common sense" against it was even taken up by the Scotch school in the name of philosophy itself; but the same Nominalism which paralyses all modern philosophy paralysed the Scotch school, and the protest died on its tongue. Without any conscious protest, however, though with an instinctive hostility to "metaphysics" and to the philosophy which it confounds with "metaphysics," physical science has immovably planted itself on a new definition of knowledge, and fortified it impregably against all comers; and, on the principle of cognition which it establishes, universal science, carrying up the physical and the mental into the higher unity of the cosmical, is even now beginning to build a temple of truth destined to be coæval with the human race.

(1) Modern Philosophy defines knowledge as the recognition by the Ego of its own conscious states.

(2) Modern science defines knowledge as twofold,—*individual knowledge*, or the mind's cognition of its own conscious states *plus* its cognition of the Cosmos of which it is a part, and *universal knowledge*, or the sum of all human cognitions of the Cosmos which have been substantiated by verification and certified by the unanimous consensus of the competent.

This latter definition may never have been formulated before, but it is tacitly assumed in all investigations conducted according to the scientific method; and the results of that method would be completely invalidated, if the definition itself should be essentially erroneous. Science does not present its truths as anybody's "states of consciousness," but as cosmical facts, acknowledgment of which is binding upon all sane minds. The principle of cognition on which it proceeds is utterly antagonistic to the Nominalism which denies all objectivity to genera and species: it is drawn from Realism alone, not the Scholastic Realism of the Middle Ages, but the Scientific Realism or Relationism which will be explained below. Nominalism teaches that things conform to cognition, not cognition to things; Scientific Realism teaches that cognition conforms to things, not things to cognition. It is futile to seek a reconciliation of these positions; the contradiction is absolute and insoluble. Modern philosophy counts nothing as "known" which is outside of the individual consciousness; modern science presents as "known" a vast mass of truths, of which only an insignificant fraction can be to-day comprised within the narrow limits of a single consciousness, and which in their totality can be contained only in the universal mind of man. Under the influence of the all-prevailing Nominalism of the present day, philosophy has, and must have, its beginning-point in the individual Ego; under the influence of its own unsuspected Realism, science begins with a Cosmos of which the individual Ego is merely a part. The one is exclusively and narrowly subjective, just so far as it is logically faithful to its own clearly proclaimed principle of cognition; the other is objective, in a sense so broad as to include the subjective within itself. In truth, so far was the old battle of Nominalism and Realism from being fought out by the end of the fifteenth century, that it is to-day the deep, underlying problem of problems, on the right solution of which depends the life of philosophy itself in the ages to come. But let it not be forgotten that the old Realism of Scholasticism is by no means the new Realism of science; the former perished as rightfully before Nominalism as Nominalism itself will perish before the latter.

That the scientific point of view is a thoroughly objective one, and that the cosmical facts discovered by science can by no means be made to vanish in the universal solvent of Nominalistic subjectivism, easily appears. One or two illustrations will suffice.

Prof. Jevons, in the *Principles of Science* (3rd ed., pp. 8, 9), thus speaks of the objective validity of mathematical formulae:—

"A mathematician certainly does treat of symbols, but only as the instruments whereby to facilitate his reasoning concerning quantities; and as the axioms and rules of mathematical science must be verified in concrete objects in order that the calculations founded upon them may have any validity or utility, it follows that the ultimate objects of mathematical science are the things themselves. . . . Signs, thoughts, and exterior objects may be regarded as parallel and analogous series of phenomena, and to treat any one of the three series is equivalent to treating either of the other series."

Prof. Tyndall, in his *Light and Electricity* (pp. 60, 61), thus illustrates the unhesitating and unconditional objectivity with which the science of physics presents its truths, as facts of a veritably existent and actually known Cosmos:—

"The justification of a theory consists in its exclusive competence to account for phenomena. On such a basis the Wave Theory, or the Undulatory Theory of Light, now rests, and every day's experience only makes its foundations more secure. . . . This substance is called the luminiferous ether. It fills space; it surrounds the atoms of bodies; it extends, without solution of continuity, through the humors of the eye. The molecules of luminous bodies are in a state of vibration. The vibrations are taken up by the ether, and transmitted through it in waves. These waves impinging on the retina excite the sensation."

Prof. Cooke, in his *New Chemistry*, illustrates the same point still more strikingly and emphatically, with reference to the atomic theory:—

"The new chemistry assumes as its fundamental postulate that the magnitudes we call molecules are realities; but this is the only postulate. Grant the postulate, and you will find that all the rest follows as a necessary deduction. Deny it, and the 'New Chemistry' can have no meaning for you, and it is not worth your while to pursue the subject further. If, therefore, we would become imbued with the spirit of the new philosophy of chemistry, we must begin by believing in molecules; and, if I have succeeded in setting forth in a clear light the fundamental truth that the molecules of chemistry are definite masses of matter, whose weight can be accurately determined, our time has been well spent."

Remembering that the weight of the hydrogen-atom is taken as the unit of molecular weight, or microcrith, and that, according to calculations based on the figures of Sir William Thomson, this atom weighs approximately, in decimals of a gramme, 0.000,000,000,000,000,000,000,109,312, or 109,312 octillionths of a gramme, one can easily perceive the impossibility of construing this utterly unimaginable quantity under any terms expressive of human consciousness. To consciousness it is equivalent to absolute zero; but the 'New Chemistry' demands belief in it as an actual quantity in Nature, an objectively existent reality in a Cosmos not resolvable into consciousness by any Nominalistic legerdemain.

It would be superfluous to cite further passages in order to illustrate the thoroughly objective spirit, method, and results of

modern science, as contrasted with those of modern philosophy. All scientific investigations are founded on a theory diametrically opposed to that of Kant: namely, that things can be known, though incompletely known, as they are in themselves, and that cognition must conform itself to them, not they to it. This is the philosophical translation of the principle of verification. The Nominalism that inculcates the contrary doctrine is an excrescence upon modern philosophy, a cancerous tumour feeding upon its life. Science has achieved all its marvellous triumphs by practically denying the fundamental principle laid down by Kant, and by practically proceeding upon its exact opposite; and it is a scandal to philosophy that she has not yet legitimated this practical procedure, overwhelmingly justified as it is by its incontrovertible results. The time has come for philosophy to reverse the Roscellino-Kantian revolution, and give to science a theory of knowledge which shall render the scientific method, not practically successful (for that it already is), but theoretically impregnable. The present article is the beginning of an attempt in that direction. A glance at the course of speculation in the past will render clearer the nature of the problem which philosophy has now to solve.

II.

The pre-Socratic philosophy of Greece was unqualified Realism, of a *naïve* and primitive type. The earlier Ionic philosophers, Thales, Anaximander, and Anaximenes, sought only to generalise the phenomena of the outer world, as products of a single original cause or principle (*ἀρχή*)—water, undifferentiated chaotic matter (*τὸ ἄπειρον*), air,—but they never dreamed of doubting its objective existence. The Pythagoreans sought the causal unity of the universe in its most general relations, as number, proportion, harmony, order, law, which they conceived as at once the abstract and concrete directive force of nature; their cosmology was no less objective than that of their predecessors. The Eleatics, Xenophanes, Parmenides, Zeno of Elea, Melissus, maintained the principle of objective Monism; their *ἐν καὶ πάντων* was illimitable and immutable Being, devoid of every positive attribute save that of thought, while the manifold appearances under which it presents itself to man were only mere seeming and delusion. But there was no element of subjectivism in their cosmology; they attributed to the cosmos permanence without change, unity without multiplicity, as its constitutive objective principle. Heraclitus taught that the principle of all things was fire, as the type of ceaseless and universal change (*πάντα χωρεῖ*), in opposition to the Eleatics; but his cosmology was none the less objective because he dis-

covered in it only change without permanence, multiplicity without unity. Empedocles sought to mediate between the Eleatic and Heraclitean views by positing four changeless elements, air, earth, fire and water, with two constant forces, love and hate, and by conceding endless change in the combinations and mutual relations of these permanent factors of creation; but he was wholly as realistic and objective as his predecessors. The Atomists, Leucippus and Democritus, offered a strictly mechanical explanation of Nature, attributing independent objective reality to the atoms which alone remained changeless in the midst of eternal change. Anaxagoras in a certain sense summed up all the preceding philosophies in his own, by means of his theory of *ὁμοιομέρειαι* or *semina rerum*, while he introduced a new principle in the assumption of an immaterial *νοῦς* as the moving and guiding cause of the universe; and he, too, was unreservedly objective in his cosmology.

With the Sophists, however, appeared the first symptoms of true subjectivism; and they may be regarded as the forerunners of Nominalism, though only in a feeble, crude, and undeveloped sense. The Sophists had no system, no school, no determinate principle save that of scepticism as to objective truth and paradoxical acquiescence in all opinions as equally true or equally false. Their movement was the destructive distillation of all fixed conviction in the heats of logomachy and interminable word-quibbling. They had nothing in common save a certain unity of spirit and method—a spirit of universal scepticism, and a method of adroit disputation by the employment of double meanings and ambiguous middle terms. Sceptics in philosophy, anarchists in ethics, their greatest historical merit is that of having polarised and called into activity the noble intellect of Socrates. They held no definite theory of subjectivism at all; but the manner in which they evacuated *general terms* of all fixed meaning and all objective validity challenged and arrested the attention of Socrates, as the true secret of their plausibility and bewildering success in debate. It was this fact that fixed and determined the direction taken by this mighty genius. The Sophists practically, though not theoretically, anticipated the Nominalists in conceding only subjective validity to generic and specific terms, which constitute the very alphabet of knowledge; and Socrates, piercing to the ulterior consequences of this procedure in the dissolution of all intellectual verity and all moral obligation, rose, like a giant in his strength, to combat a great tendency of his time which threatened to cause the fatty degeneration of Greek civilisation, the melancholy decay of Greek thought and life.

The astounding success of Socrates in this great struggle is

the most splendid monument to the power of individual genius that the history of philosophy can show. Alone and unaided, he checked and reversed the Nominalistic revolution already far advanced, annihilated the Sophists as a practical power in philosophy, and determined the course of speculation for a millennium and a half in the direction of Realism. No other victory such as this was ever won in the annals of human thought; and yet what historian of philosophy has perceived, much less celebrated it? It will never be appreciated until the dominant Nominalism of modern philosophy has given place to the dawning New Realism of modern science—a day perhaps less distant than now appears. What gave success to Socrates in this vast encounter was the fact that he planted himself on an immovable rock, the objective significance and validity of general terms, as opposed to their purely subjective import and value. Even Schwegler, blind as he is to the enormous importance of the struggle between Nominalism and Realism (to which in his *History of Philosophy* he devotes less than one page!), says of Socrates that “there begins with him the *philosophy of objective thought*” (p. 38, Stirling’s Translation—the italics are his). Aristotle explicitly declares in the *Metaphysics* (XII. 4) that “Socrates was engaged in forming systems in regard to the ethical or moral virtues, and was the first to institute an investigation in regard to the universal definition of these. . . . There are two improvements in science which one might justly ascribe to Socrates—I allude to his employment of inductive arguments and his definition of the universal. . . . Socrates did not, it is true, constitute universals a thing involving a separate subsistence, nor did he regard the definitions as such; the other philosophers, however, invested them with a separate subsistence.” But Socrates did attribute universal objective authority to the virtues he defined; he refuted the Sophistic construction of them as merely subjective; he repudiated the Sophistic notion that nothing is good or bad by nature (*φύσει*), but only by statute (*νόμῳ*), and vindicated the objectivity of general terms *in some sense*, without reaching that luminous doctrine of the objectivity of relations which alone explains it clearly. That Socrates conceived of universals as objective realities, without arriving at any definite conclusions as to the mode of this reality, sufficiently appears from the subsequent course of Plato and Aristotle, both of whom inherited from Socrates the undefined objectivity of universals, and each of whom proceeded to define it in his own way. The point to be here specially noted is the fact that Socrates rolled back the advancing tide of Nominalism let loose by the Sophists, accomplished the feat by means of the definition of universals as

objectively valid and real, and stamped the thought of fifteen hundred years with the impress of his own Realism.

The impending Nominalistic revolution having been thus definitely arrested by Socrates,—the great question of universals having been bequeathed by him to succeeding generations for a full and final solution,—the existence of an objective outer world was a common and undisputed premiss among his followers. In particular, the assumption of the objective reality of genera and species, as necessarily involved in that of a cognisable outer world, and as constituting the objective ground of all general terms, became a common point of departure to Plato and Aristotle. But, while Plato erected on this assumption his theory of Ideas, Aristotle erected on it his opposing theory of Essences or Forms—to which reference will be more particularly made below. Both the Platonic and Aristotelian points of view were fundamentally and equally objective, and equally alien to the point occupied by modern philosophy since the triumph of Nominalism over Realism, when the tides of thought began to set irresistibly in the direction of subjectivism.

The Stoics betrayed to some extent the influence of the Sophists in their theory of universals. They discarded alike the Platonic theory of Ideas and the Aristotelian theory of Forms, and were apparently the first to proclaim distinctly the doctrine of subjective concepts, formed through abstraction. This doctrine, however, did not attain in their hands a full logical development into the theory of Nominalism; in fact, it did not at all prevent the Stoics from advancing to the construction of a positively objective cosmology and theology of their own; and, although with a serious logical inconsistency, they maintained on the whole an objective point of view.

The Epicureans, with their doctrine of the atoms and the truth of all perceptions of matter, may be considered quite free from the tendency to subjectivism, so far as the present discussion is concerned.

The Sceptics—the earlier with their “Ten Tropes,” and the later with their “Five Tropes”—did not so much deny the existence of an outer world as the trustworthiness of human knowledge of it, and advanced no definite doctrine respecting universals. They occupied mainly negative and critical ground, and exerted no great influence in that controversy. Their arguments mostly rest on the assumption of Realism.

During the third great period of Greek philosophy, including the Græco-Judaic, the Neo-Pythagorean, and the Neo-Platonic schools, the predominant tendency was pre-eminently objective, since the mystical or theosophical contemplation of a Divine

Transcendent Object by means of the "ecstatic intuition" is incompatible with an exclusive subjectivity. Theosophy, in fact, tends to reduce the subject to a state of pure passivity, and to absorb him completely in contemplation of the Object of worship.

In no period of Greek philosophy, therefore, did the Nominalistic tendency gain much force or headway after it had once been checked by Socrates. Its hour had not yet come.

Passing now to the Christian Era, it may be said that the Patristic period was devoted to the development of systematic or dogmatic theology, without interference from pagan philosophy after the closing of the School at Athens, in A.D. 529, by edict of the emperor Justinian. Since dogmatic theology, by the very nature of its conceptions, is unqualifiedly objective, the Patristic and in main the Scholastic periods are chiefly noticeable here as having carried the principle of objectivity to so abnormal and oppressive a degree of development as to cause speculation to rebound to the opposite extreme. The creation of a great body of doctrine held by the Catholic Church to be the absolute and unmixed truth of God, and the terrible intolerance with which the Church stamped out all dissent from this fixed standard of belief, inevitably tended to excite a reaction against it, in proportion to the mental activity of the age. Moreover, the Church had planted itself in philosophy upon the Realism of Plato and Aristotle; and it was equally inevitable that the reaction should be against this, no less than against the theology of the Church. There is no room for wonder, then, at the fact that the cause of Nominalism came to be identified with the cause of intellectual and religious freedom, and the triumph of the one with the triumph of the other. Consequently it is to the Scholastic period, and to the rise of the great controversy between Realism and Nominalism—the former representing Catholic orthodoxy and the latter heterodoxy,—that must be traced the beginning of the general subjective movement of modern philosophy, although this movement did not gain full headway till after the downfall of Scholasticism, when victorious Nominalism had time to develop unrestrained all the latent tendencies it involved. Tennemann has significantly and truly said that this momentous controversy was "never definitely settled". The reason is that both sides were right, yet neither wholly so; they did but bequeath to later times a problem they could not solve. Disguised as it is by new forms and new names, the immeasurably important issue between objectivism and subjectivism involved in that ancient controversy survives to-day. Nominalism, by virtue of the truth it contained and

the freedom it represented, conquered Realism in philosophy, and culminated in the splendid genius of Kant; Realism, by virtue of the truth it too contained, conquered Nominalism in science, created an army of experimental investigators of Nature, and culminated in the establishment of the scientific method, which, though as yet purely practical and empirical, demands with increasing emphasis from philosophy a theory of knowledge that shall justify it in all eyes. Here is the explanation of the wide divergence, the virtual divorce and even antagonism, which is so patent a fact to all who look beneath the surface of things, between science and philosophy. All the intellectual interests of mankind must suffer greatly, until the breach is effectually healed; and the first step to the reconciliation so much to be desired must be a clear comprehension of the causes which have created the division. Hence the necessity of surveying the ancient battle-field of Scholasticism.

The proximate origin of the great mediæval dispute over the nature of universals seems to have been a passage at the commencement of Porphyry's *Introduction* to Aristotle's treatise on the *Categories*, known at the time only through the Latin translation of Boëthius, in which these three problems were stated, but not elucidated, with respect to genera and species:—“(1) Whether they have a substantive existence, or reside merely in naked mental conceptions. (2) Whether, assuming them to have substantive existence, they are bodies or incorporeals. (3) Whether their substantive existence is in and along with the objects of sense, or apart and separable.” Neglecting minor distinctions, refinements and subtleties, and without following the long and tedious course of the dispute, it will amply suffice for present purposes to state concisely the five leading positions maintained by different philosophers of the Scholastic period, as follows:—

(1) **EXTREME REALISM** (*Universalia ante rem*) taught that universals were substances or things, existing independently of and separable from particulars or individuals. This was the essence of Plato's Theory of Ideas, and Plato was the father of Extreme Realism as held in the Scholastic period. Scotus Erigena, who died A.D. 880, was the first to revive this doctrine in the Schools, borrowing from the Pseudo-Dionysius Areopagita.

(2) **MODERATE REALISM** (*Universalia in re*) also taught that universals were substances, but only as dependent upon and inseparable from individuals, in which each inhered; that is, each universal inhered in each of the particulars ranged under it. This was the theory of Aristotle, who held that the *τὸδε τι*

or individual thing was the First Essence, while universals were only Second Essences, real in a less complete sense than First Essences. He thus reversed the Platonic doctrine, which attributed the fullest reality to universals only, and a merely "participative" reality to individuals. Until Scotus Erigena resuscitated the Platonic theory, Aristotle's was the received doctrine in the Schools; and the warfare was simply between those two forms of Realism prior to the advent of Roscellinus.

(3) EXTREME NOMINALISM (*Universalia post rem*) taught that universals had no substantive or objective existence at all, but were merely empty names or words (*nomina, voces, flatus vocis*). Though probably not the absolute originator of this *sententia vocum*, as the doctrine came to be called, Roscellinus, Canon of Compiègne, was the first to give it currency and notoriety, and the Council of Soissons, under the influence of the Realist Anselm of Canterbury, his chief opponent, forced him in the year 1092 to recant the tritheistic interpretation of the Trinity, which he had consistently and courageously avowed. The theory of Extreme Nominalism was thus put under the ecclesiastical ban.

(4) MODERATE NOMINALISM or CONCEPTUALISM (*Universalia post rem*) taught that universals have no substantive existence at all, but yet are more than mere names signifying nothing; and that they exist really, though only subjectively, as concepts in the mind, of which names are the vocal symbols. Abélard is claimed by some, but probably incorrectly, as the author of this modification of the Nominalistic view; William of Occam, who died in 1347, seems to have been the chief, if not the earliest, representative of it. The *Encyclopædia Britannica* (xvi., 284, 8th ed.) says: "The theory termed Conceptualism, or conceptual Nominalism, was really the one maintained by all succeeding Nominalists, and is the doctrine of ideas generally believed in at the present day".

(5) Albertus Magnus (died 1280), Thomas Aquinas (died 1274), Duns Scotus (died 1308), and others fused all these views into one, and taught that universals exist in a three-fold manner: *Universalia ante rem*, as thoughts in the mind of God; *Universalia in re*, as the essence (quiddity) of things, according to Aristotle; and *Universalia post rem*, as concepts in the sense of Moderate Nominalism. This is to-day the orthodox philosophy of the Catholic Church, as opposed to the prevailingly exclusive Conceptualism of the Protestant world.

Thus both Extreme Realism and Moderate Realism maintained the objective reality of genera and species; while both Extreme Nominalism and Moderate Nominalism maintained that genera and species possess no objective reality at all.

In contrast with all the views above presented, another and sixth view will now be stated, which, taken as a whole and with reference to the vitally important consequences it involves, is believed to be both novel and true.

(6) **RELATIONISM OR SCIENTIFIC REALISM** (of which *universalia inter res* may be adopted as an apt formula) teaches that universals, or genera and species, are, *first*, objective relations of resemblance among objectively existing things; *secondly*, subjective concepts of these relations, determined in the mind by the relations themselves; and, *thirdly*, names representative both of the relations and the concepts, and applicable alike to both. This is the view logically implied in all scientific classifications of natural objects, regarded as objects of real scientific knowledge. But although empirically employed with dazzling success in the investigation of Nature, it does not appear to have been ever theoretically generalised or stated.

This view rests for its justification upon a broader principle; namely, that of the *Objectivity of Relations*, as opposed to the principle of the *Subjectivity of Relations*, which is the essence of the Nominalistic doctrine of universals inculcated by modern philosophy. Kant distinctly made "Relation" one of the four forms of the logical judgment which determine the twelve "categories of the understanding"; *i.e.*, the *à priori* forms of thought, totally independent of "things-in-themselves," and applicable to them only so far as they are objects of a possible "experience," which, however, reveals nothing of their real nature. This doctrine that relations do not inhere at all in "things-in-themselves," but are simply imposed upon them by the mind in experience as the purely subjective form of phenomena, is strictly deducible from the Nominalistic doctrine that general terms, by which relations are expressed, correspond to nothing objectively real; and Kant's master-mind is nowhere more clearly apparent than in the subtlety and profundity with which he thus seized the prevalent but undeveloped Nominalism of the modern period, and erected it into the most imposing philosophical system of the world. By this doctrine of the Subjectivity of Relations, Kant reduced the outer world to utterly unknown *Dinge-an-sich*, and paved the way for his still more thorough-going disciple, Fichte, to deny their very existence, and thereby to take a great stride in conducting Nominalism to its only logical terminus, Solipsism.

The principle of Relationism, however, rests on these self-evident propositions:—

- (1) Relations are absolutely inseparable from their terms.
- (2) The relations of things are absolutely inseparable from the things themselves.

- (3) The relations of things must exist where the things themselves are, whether objectively in the Cosmos or subjectively in the mind.
- (4) If things exist objectively, their relations must exist objectively; but if their relations are merely subjective, the things themselves must be merely subjective.
- (5) There is no logical alternative between affirming the objectivity of relations in and with that of things, and denying the objectivity of things in and with that of relations.

For instance, a triangle consists of six elements, three sides and three angles. The sides are things; the angles are relations—relations of greater or less divergence between the sides. If the sides exist objectively, the angles must exist objectively also; but if the angles are merely subjective, so must the sides be also. To affirm that the sides are objective realities, even as incognisable things-in-themselves, while yet the angles, as relations, have only a subjective existence, is the *ne plus ultra* of logical absurdity. Yet Kantianism, Nominalism, and all Nominalistic philosophy, are driven irresistibly to that very conclusion.

In short, it is because modern philosophy rests exclusively on the basis of Nominalism, of which the only logical terminus is absolute Egoistic Idealism or Solipsism, and because modern science rests exclusively on the basis of Relationism, that we affirm unqualifiedly an irreconcilable antagonism between the two just so long as their respective bases remain unchanged. It seems needless, but may be nevertheless advisable, to point out explicitly that Relationism carefully shuns the great error of Scholastic Realism, *i.e.*, the hypostasisation of universals as substances, entities, or things; it teaches that genera and species exist objectively, but only as relations, and that things and relations constitute two great, distinct orders of objective reality, inseparable in existence, yet distinguishable in thought.

The philosophic value of the principle of Relationism is strikingly illustrated in the ease with which, applied as a key, it unlocks the secret and lays bare the signification of the ancient and still unfinished controversy between Realism and Nominalism.

- (1) It shows that Extreme Realism was right in upholding the objectivity of universals, but wrong in classing them as independent and separable substances or things.
- (2) It shows that Moderate Realism was right in upholding the objectivity of universals, but wrong in making them inherent in individuals AS INDIVIDUALS (*in re*) rather

than in individuals AS GROUPS (*inter res*). Relations do not inhere in either of the related terms taken singly, but do inhere in all the terms taken collectively.

- (3) It shows that Extreme Nominalism was right in denying the objectivity of universals as substances or things (the great error of its opponent), and right in affirming the existence of universals as names; but wrong in denying their objectivity as relations and their subjectivity as concepts.
- (4) It shows that Moderate Nominalism or Conceptualism was right in denying the objectivity of universals as substances, and also right in affirming their subjectivity as concepts; but wrong in denying their objectivity as relations.

Thus every element of truth is gathered up, and every element of error is eliminated, by rejecting the four historic theories already recapitulated, together with the merely syncretistic fifth theory, and by substituting in their place the propounded sixth theory of Relationism. Its precision, lucidity, comprehensiveness, and adequacy to account for all the facts, will become so evident to anyone patient enough to master it fully in all its bearings, as to warrant the indulgence of a hope that it may permanently solve the great problem declared by Tennemann to have never been "definitively settled".

III.

When Scholasticism fell, the theory of Relationism had occurred to no one. Each of the competing theories discerned the weakness of its rivals, yet could not discern its own, and was therefore unable to arrive at the real truth respecting universals. Consequently, as has just been pointed out, the truth was divided among them. Nominalism gradually won the ascendancy among philosophers in the form of Conceptualism; while Relationism became, not indeed a received theory, since as a theory it did not yet exist, but yet the unformulated and empirical principle of the actual practice of scientific observers, experimenters, and investigators of nature. Philosophy divorced itself from a true objectivity, and surrendered itself to subjectivism in the form of Moderate Nominalism; while science, ceasing to philosophise, turned its back upon the barren metaphysics of the schools, because they could yield no objective knowledge, and learned the sad lesson of contempt for philosophy itself.

A period of transition followed the downfall of Scholasticism, full of confusion and conflicting tendencies. Spasmodic resus-

citation of various ancient philosophies—Aristotelianism in a more accurately known form, Platonism, Neo-Platonism, Stoicism, Epicureanism, &c.—ensued; but these revived systems did not materially contribute to the growth of the subjective tendency, since, as has been shown, ancient philosophy in the post-Socratic periods had been prevailingly objective in all its forms. The true origin of the increasing subjectivism of philosophy, and therefore the true secret of the increasing repugnance of science for philosophy itself, lay in the triumph of Nominalism over the relatively inferior Realism of the Middle Ages, in its denial of all objective knowledge save of particulars *as isolated and unrelated*, and in its claim of a strictly subjective genesis for universals as concepts or names alone. Philosophy in this manner stripped the objective world of everything that was really intelligible—genera, species, relations of all kinds; while science, bereft of all philosophical aid, took refuge in a rude sort of common sense and fortified itself in a spirit of defiance to all speculative thought. Bacon's popularity rested really on no stronger foundation: he merely headed an unreasoning revolt against Nominalism, hardly knowing what he did, yet practically rendering an immense service by rallying the enterprising and curious spirits of the time about the standard of "induction". He too joined in the wide-spread outcry against Aristotle and his followers, mistakenly believing that Aristotle was really responsible for the Nominalism of the age which he vaguely felt to be the chief obstacle to science. The results of this open feud between science and philosophy were disastrous to both in the end; for, while the latter tended steadily towards Idealism and Solipsism, the former as steadily tended towards Materialism. For the time being, however, the revolt of science against philosophy was most salutary.

While science adopted a purely empirical objective method, took Nature for granted, investigated things and their relations by observation and experiment on the hypothesis of their equal objectivity, and entered on a career of dazzling conquest, without troubling itself to invent any philosophical justification for a method so prolific of discoveries as to silence all criticism or cavil by the brilliancy of its achievements, philosophy had already entered upon a path which led indeed to the construction of numerous subjective systems of unsurpassed ability, yet to none that could endure. The history of philosophy has been for three centuries only a succession of gaily-coloured pictures, each more startlingly beautiful than the last, yet each doomed to disappear at the next turn of the kaleidoscope. While science can proudly point to a vast store of verified and established truths, which it is a liberal education to have learned and the

merest lunacy to impugn, philosophy has achieved nothing that is permanently established. The cause of this vast difference in result is a radical difference in method. Objectivism, albeit solely empirical, has created the glory of science; subjectivism, albeit elaborately and ostentatiously reasoned, has created the shame of philosophy. And philosophy can never redeem itself from this shame of utter barrenness until it repudiates subjectivism with Nominalism, its cause.

The epoch of Scholasticism is regarded by some as closed by the death of Gabriel Biel, the "last Scholastic," in 1495, when Nominalism had acquired almost undisputed sway.

Now the essential method of Scholasticism had been, as Tennemann well expresses it, to "draw all knowledge from conceptions". So long as Realism flourished, and universals, as entities, were held to possess substantial objective existence, the analysis of concepts, independently of experience or verification, was held to yield real knowledge of their objective correlates—a mistake impossible to the New Realism or Relationism. But when Nominalism had destroyed the objectivity of universals, it had also destroyed the possibility of deriving objective knowledge from concepts. A dilemma thus arose: either objective knowledge is unattainable, or it must be attained otherwise than by the mere analysis of concepts as such. But how?

In this manner was developed a new and momentous problem, that of the Origin of Knowledge, which now displaced the old and still unsolved problem of the Nature of Universals—not at all fortuitously, but logically and inevitably as a direct result of the triumph of Nominalism. Nominalism had answered the old question after its own manner by resolving universals into merely subjective notions; and this answer, false as it was, was accepted as satisfactory. But the acceptance of it involved some awkward consequences. If objective knowledge cannot be derived from concepts, whence can it be derived? Or is there no such thing as objective knowledge?

Science met these questions by boldly adopting the principle of Objective Verification—a principle depending absolutely for its philosophical justification on the theory of Relationism, but adopted by Bacon and the inductionists in general as a purely empirical method, in utter indifference to such justification. From that time forward, scientific men have quietly assumed the objectivity of relations, and steadily pursued the path of discovery in total disregard of the disputes of metaphysicians—not, however, without a serious loss to science itself, in the growth and spread of the false belief that science can legiti-

mately deal only with physical investigations, and that the scientific method has no applicability in the "higher sciences".

But philosophy met the same questions by dividing into two hostile camps. The sufficiency of the Nominalistic answer to the question of universals—that they are exclusively of subjective origin—was taken for granted by both parties; genera, species, relations of all kinds, were unanimously conceded to possess no objective validity whatever. Logically, this is the total surrender of all objective knowledge; and in the long run modern philosophy has come to accept this result, as shown by the almost entire unanimity of modern philosophers in the opinion that things-in-themselves, or noumena, are utterly incognoscible. But it is impossible to maintain this opinion in logical consistency, and on this point not a single logically consistent philosopher can be pointed out; if he can be found, he will prove to be an inexorably rigorous Solipsist, not afraid to deny the existence of all minds save his own, no less than that of the material world. It would be refreshing to meet with a subjectivist possessed of the courage of his opinion; but he would be the terror of all his brother-subjectivists, perhaps a candidate for premature interment.

The division that now arose and separated modern philosophy into two great contending parties, did not concern the question whether knowledge originated in the object or in the subject,—for both parties agreed in the Nominalistic answer to this question,—but whether, in the subject mind itself, it originated in the senses or in the intellect. That was the great new question started at the recognised dawn of modern philosophy by Descartes and Locke; and both parties to the controversy, both the *à priori* and the *à posteriori* schools, were equally switched off upon the false track of Nominalism that conducts to Egoism or to nothing.

Descartes' theory of "innate ideas" encountered a vigorous rival in Locke's theory of experience as limited to the data of "sensation and reflection"; and thus the two armies took position for the long warfare that is resultless still. There is not the slightest occasion, for the purposes of this paper, to follow the course of this dispute, or to repeat the argumentation and counter-argumentation by which it has been maintained. The point of view here taken is that both these famous schools have logically immured themselves in the dungeon of subjectivism, and are utterly powerless to release themselves; that the one is just as incompetent as the other to explain the "origin of knowledge" about which they have been contending so long; and that, like Venus and Mars suspended in Vulcan's cage to provoke the "inextinguishable laughter" of the Odyssean gods,

they do but enact a farce at which philosophy hangs her head. Travelling round the same circle of subjectivism in opposite directions, these two schools are fated to re-unite on the farther rim in one identical point—the stand-point of Absolute Egoistic Idealism. That is the only possible terminus of a subjectivism that, beginning with the definition of knowledge as only the mind's recognition of its own states, dares to obey the logic of its own fundamental principle; and what is the philosophy worth that contradicts itself? No sequent thinker who begins with the Ego as sole starting-point will fail to end with the Ego as sole terminus, unless he stoops to unworthy tricks or evasions; and that is the suicide of philosophy.

The triumph of Nominalism did indeed force upon thought a new problem in the question of the "origin of knowledge"; but great is the delusion of the two schools which imagine the solution of that question to lie with one of themselves.

The *à priori* school started with Descartes' *Cogito ergo sum*; that is, with an original positing of the Ego as an *individual thinking being*. The *à posteriori* school started with Locke's "sensation"; that is, with an original positing of the Ego as an *individual feeling being*. That is essentially the only difference—the difference between beginning with individual thought or individual feeling as the prior element of individual consciousness,—both beginnings being equally and incontrovertibly egoistic. But this is a trivial difference indeed, compared with the abysmal difference between both these egoistic schools, on the one hand, and modern science, on the other; for here the issue is a broad, deep, fundamental one—namely, whether the real "origin of knowledge" is in the Ego or in the Non-Ego, or in both. Knowledge itself, in the conception of both these Nominalistic schools, is confined to the series of changes that go on in consciousness; and all their mutual discussions are mere child's-play, compared with the discussions that await philosophy the moment she comes abreast of the time.

Science is to-day challenging emphatically the very foundation of both *à priori* and *à posteriori* philosophies; and the challenge is none the less menacing or deep-toned, because it has been hitherto uttered in deed rather than word. She denies, not by a theory as yet, but by the erection of a vast and towering edifice of verified objective knowledge, that genera and species are devoid of objective reality, or that general terms are destitute of objective correlates; she denies that Nominalism has rightly solved the problem of universals, when that solution would in an instant, if conceded, sweep away all that she has won from Nature by the sweat of her brow. Her very existence

is the abundant vindication of Relationism, as the stable and solid foundation of real knowledge of an objective universe. As the case now stands, philosophy has two great schools, equally founded on a reasoned subjectivism which *denies the possibility of knowing*, in any degree, an objectively existent cosmos as it really is; while science rests immovably on the fact that she *actually knows* such a cosmos, and proves *by verification* the reality of that knowledge which philosophy loudly and emphatically denies. Science must be all a huge illusion, if philosophy is right; philosophy is a sick man's dream, if science is right. One or the other must speedily effect a total change of base; and it is safe to predict that the change will not be made by science.

Three answers are given, therefore, to the question as to the Origin of Knowledge; two by Nominalism, with its two schools of modern philosophy, and one by Relationism, interpreting the silent method of science. They are substantially as follows:—

(1) The *à priori* school teaches that knowledge has two ultimate origins, the experience of the senses and the constitution of the intellect—the senses contributing its *à posteriori* “matter” and the intellect contributing its *à priori* “form”; that the intellect is the source of certain universal and ante-experiential principles of knowledge which cannot be in any manner derived from the senses; that these principles or “forms” are themselves an object of pure *à priori* cognition, independently of experience; that experience consists solely of sense-phenomena, and sense-phenomena give no knowledge of their merely hypothetical noumenal causes, *i.e.*, of “things-in-themselves”. In other words, things (if they exist—which is at least dubious) conform themselves to cognition; the subject knows only its own subjective modifications, arranged in a certain order according to *à priori* laws of knowledge which are only subjectively valid. This is Nominalistic Subjectivism of the *à priori* type.

(2) The *à posteriori* school teaches that knowledge has only one ultimate origin, the experience of the senses; that the intellect is indeed the source of certain universal constitutive principles of knowledge, but that these were originally derived from the senses, having been slowly organised and consolidated, by the law of the “association of ideas,” into hereditarily transmissible “forms” of experience; that there is no such thing as “pure *à priori* cognition,” independent of experience; that experience consists solely of sense-phenomena, that the intellect itself has been slowly evolved out of it, and that sense-phenomena give no knowledge of their merely hypo-

thetical noumenal causes. In other words, things-in-themselves (if they exist—which is equally dubious by this theory) conform themselves to cognition; the subject knows only its own subjective modifications, arranged in a certain order according to *à posteriori* laws of knowledge, which are only subjectively valid. This is Nominalistic Subjectivism of the *à posteriori* type.

Thus both of these dominant schools thoroughly agree in planting themselves upon the foundation of Moderate Nominalism or Conceptualism; they agree that universals, the genera and species by which alone sense-phenomena are reducible to intelligible order, are merely subjective concepts without objective correlates. They agree that things-in-themselves are unknown and unknowable, and that the subject knows its own conscious states alone. By both schools, consequently, the principle of Relationism is either unknown or ignored; relation itself is by both reduced to a merely subjective category, valid only as the subjective order imposed on subjective sense-phenomena, and utterly meaningless as applied to noumena; and noumena—intelligible objective realities, as presented by the various sciences—are totally incognoscible. But when the vitally pertinent question is put: “*Why* should the series of sense-phenomena, or sensations, or consciousnesses in general, be what it is? *Why* should the senses and understanding conspire to give a coherent appearance of objective knowledge, when no objective knowledge is possible?” neither school has any reply to make. The only reply consistent with their common premisses would be Fichte’s reply, that the apparent objects of knowledge are given by the subject to itself, according to some inscrutable law working subtly beneath consciousness itself. This reply has at least the merit of consistency with the ground-principles of subjectivism, and does not flinch from landing philosophy in Solipsism undisguised. But few subjectivists possess sufficient hardihood to make this consistent reply; they prefer to “have their cake and eat it too”.

(3) The theory of Scientific Philosophy (by which is meant simply the philosophy that founds itself theoretically upon the practical basis of the scientific method) teaches that knowledge is a dynamic correlation of object and subject, and has two ultimate origins, the cosmos and the mind; that these origins unite, inseparably yet distinguishably, in experience, *i.e.*, the perpetual action of the cosmos on the mind *plus* the perpetual reaction of the mind on the cosmos and on itself as affected by it; that experience, thus understood, is the one proximate origin of knowledge; that experience has both an objective and a sub-

jective side, and that these two sides are mutually dependent and equally necessary; that the objective side of experience depends on the real existence of a known universe, and its subjective side on the real existence of a knowing mind; that experience includes all mutual interaction of these, whether sensitive or cognitive, and is utterly inexplicable even as subjective sensation, unless its sensitive and cognitive elements are equally recognised; that this extended conception of experience destroys the distinction of noumena and phenomena, as merely verbal and not real; that "things-in-themselves" are partly known and partly unknown; that, just so far as things are known in their relations, they are known both phenomenally and noumenally, and that the possibility of experimentally verifying at any time their discovered relations is the practical proof of a known noumenal cosmos, meeting every demand of scientific certitude and furnishing the true criterion and definition of objective knowledge. In other words, science proceeds upon a principle diametrically opposite to that of Nominalism, already explained under the name of Relationism. It assumes that cognition conforms itself to things, not things to cognition,—that being determines thought, not thought being,—that the subject knows not only its own subjective modifications but also the objective things and relations which these modifications reveal. Kant did but "assume" the counter-principle; and if he considered his assumption as at last "demonstrated" by his system as a whole, science equally considers its assumption as demonstrated by the actual existence of its verified and established truths as a body of objective knowledge.

These three answers to the question as to the origin of knowledge show how vast is the divergence between modern philosophy and modern science. Philosophy has never yet entirely shaken off the blighting influence of Scholasticism, even while fancying itself wholly emancipated from it; for Nominalism, no less than the old Realism, was the legitimate offspring of Scholasticism. It was only one of the two great answers, both one-sided and both wrong, which Scholasticism gave to the question of universals. Philosophy is still Scholastic to-day; it has never yet modernised itself in any true sense, and it never will do so until it sits modestly at the feet of science, imbues itself thoroughly with the spirit of the scientific method, and applies the principle of Relationism to the reconstitution of the moral sciences and the total reorganisation of human knowledge. This, though a vast revolution for philosophy herself, will be simply giving in her adhesion to the revolution which science made long ago, and has rendered irreversible. But it will also

be putting herself at the head of that revolution, and conducting it to conquests in regions of the highest truth of which science herself has never yet dreamed.

IV.

Aristotle taught, with truth, that the proper object of science is the universal rather than the particular or individual. Although it was his doctrine that individuals are First Essences, while species are Second Essences, and genera Third Essences, real only in a lower sense than the former, nevertheless it was also his doctrine that the universal inheres in each individual substance and constitutes its conceptual or intelligible essence (*ἡ κατὰ τὸν λόγον οὐσία*). The universal and the individual were inseparable, and must therefore be known together: yet the universal, being the essence of the individual, was itself the only proper and real object of scientific cognition.

Translating the Moderate Realism of Aristotle into the more accurate language of Relationism, and not forgetting to correct its capital error of making the universal inhere in each individual as an individual (*in re*) rather than in all the individuals as a group (*inter res*), the meaning of his doctrine is that science is concerned with the general relations of things rather than with the things themselves—with general laws rather than with the peculiarities or accidents of individual objects.

Modern science proceeds uniformly according to this incontestable principle. Says Prof. Jevons:—

“There is no such process as that of inferring from particulars to particulars. A careful analysis of the conditions under which such an inference appears to be made shows that the process is really a general one, and what is inferred of a particular case might be inferred of all similar cases. All reasoning is essentially general, and all science implies generalisation. In the very birth-time of philosophy this was held to be so: ‘Nulla scientia est de individuis, sed de solis universalibus,’ was the doctrine of Plato, delivered by Porphyry. And Aristotle held a like opinion; *Οὐδεμία δὲ ἐπιστηρὸν*. ‘No art treats of particular cases, for particulars are infinite *τέχνη σκοπεῖ τὸ καθ’ ἕκαστον* . . . *τὸ δὲ καθ’ ἕκαστον ἀπείρον καὶ οὐκ* and cannot be known.’ No one who holds the doctrine that reasoning may be from particulars to particulars can be supposed to have the most rudimentary notion of what constitutes reasoning and science.”

It is, in truth, impossible to study even a particular case without generalising; all knowledge consists in the seizure of the relations of things, and every name of a relation is of necessity a general term. Prof. Jevons correctly quotes both Plato and Aristotle as concurring in this fundamental principle, since both of them occupied the stand-point of objectivism; and Prof. Jevons himself, as a scientific man, can occupy no other, al-

though, as a thinker, more or less infected with the subjectivism of modern philosophy, he has not succeeded in occupying it always or with entire consistency.

Now subjectivism reduces all science to the knowledge of *one individual*, the Ego,—which, as just shown, is no science at all. If its fundamental definition of knowledge means anything, or is faithfully adhered to, subjectivism teaches that the intelligent subject has no intelligence save of itself—has no warrant for believing in the existence of anything save itself—knows nothing but the inexplicable order of its own sensations and thoughts. It reduces all existence to an unrelated One, while of an unrelated One no science is possible. In a word, subjectivism, if logical, annihilates science at a blow.

There is no logical escape from this inference, drawn directly from the subjectivist definition of knowledge. Subjectivism cannot concede the knowledge of any existence except that of the subject itself; it cannot concede any knowledge of the subject, except that of its seriated conscious states; it cannot concede any knowledge of these conscious states as a series, but only as single and unrelated; and it thus lands ultimately in the scepticism of Hume. For to generalise a series of thoughts as *thought*, or a series of sensations as *sensation*, is to use a general term, which, *ex hypothesi*, corresponds to no existent correlative in an objective sense; the general terms, thought, sensation, consciousness, on the principle of Nominalism, denote nothing real in the thoughts, sensations or consciousnesses which are generalised, but express only an act of the subject as generalising. Apply the very same principle to the knowledge of the subject itself which subjectivism applies to the knowledge of the outer world,—refuse that objective validity to general terms as applied to the world of consciousness which is refused to general terms as applied to the world outside of consciousness,—and it is shown irresistibly that subjectivism does not permit “knowledge” even of the subject’s own “conscious states”. “Consciousness” is a general term; “state” is a general term; every such term denotes a relation among certain related objects; and if this relation must be separated from the related objects when they are *outside of the subject*, why must it not be separated from the related objects when they are *within*? Subjectivism necessarily destroys itself by its own definition of knowledge; it cannot exist an instant except by denying the very principle it asserts; it escapes self-annihilation only on the hard and humiliating condition that it shall perpetually contradict itself. The sword with which it slays science pierces its own heart.

Nothing is more astonishing than the utter indifference of

subjectivists to their own innumerable self-contradictions on these vital points—self-contradictions all the more amusing in view of their insistence that objectivism shall be rigorously and consistently reasoned. Let a few instances be here noticed.

Berkeley's idealism (a direct product of the Nominalistic revolution) is usually praised to the skies as unerringly logical and self-consistent. Yet the same reasoning which leads him to deny the existence of a material world ought to lead him to deny the existence of other human minds—of which there is no proof except sight, hearing, and touch of the material bodies by which these minds manifest themselves. Berkeley's great paralogism on this point is pointed out even by his own editor, Dr. Krauth (p. 400), as follows:—

“Berkeley is a realistic idealist ; holding that the realistic inference is invalid as regards matter, but conceding it as regards mind. He holds to real substantial spirits, God and man. Hence, too, his monism is only generic. He holds to a monism of genus,—to spirit alone ; but he concedes a dualism of species,—infinite Spirit, the cause of ideas, and finite spirits, the recipients of them. But this his strength is also his weakness. Every moral advantage of his Idealism over its successors is secured at the expense of its development and of its logical consistency.”

Mr. Shadworth H. Hodgson, in his *Time and Space* (Introduction, p. 5), says :—

“By the term consciousness, in this Essay, is always meant consciousness as existing in an individual conscious being ; and proofs drawn from such a consciousness can have no validity for other conscious beings, unless they themselves recognise their truth as descriptions applicable to the procedure and phenomena of their own consciousness. Doctrines, if true, will ultimately be recognised as such by all individuals whose consciousness is formed on the same type, that is, by all human beings.”

Here is luminously presented the cardinal and universal contradiction in all non-solipsistic form of subjectivism : (1) The assumption that the Ego knows only the changes of its own consciousness ; and (2) the assumption that the Ego knows other Egos to exist that are “formed on the same type”. One of these assumptions necessarily destroys the other.

There are countless similar self-contradictions scattered all through the writings of subjectivists, some amusing by their *naïveté*, some ingenious in their subtlety, some amazing by their evident unconsciousness, but all sufficiently humiliating and mortifying to those who would fain see philosophy comport herself with the dignity of science rather than with the agility of a circus-clown. One further illustration will suffice.

Prof. Clifford, in his *Lectures and Essays* (ii. 71), takes the ground of the most uncompromising subjectivism at the outset, and then coolly proceeds to break loose from it in the most violently illogical style, yet apparently without the least

suspicion of the exhibition he thereby makes of himself as a philosopher :—

“The objective order, *quâd* order, is treated by physical science, which investigates the uniform relations of *objects* in time and space. Here the word *object* (or *phenomenon*) is taken merely to mean a group of my feelings, which persists as a group in a certain manner; for I am at present considering only the objective order of my feelings. The object, then, is a set of changes in my consciousness, and not anything out of it. . . . The inferences of physical science are all inferences of my real or possible feelings; inferences of something actually or potentially in my consciousness, not of anything outside of it.”

Bald and unblushing as is the egoism of this passage, it is entirely clear; and it is quite possible to build up on this basis an idealistic Solipsism which shall at least tolerably cohere with itself. But Prof. Clifford immediately proceeds to crucify his own subjectivism in this manner :—

“However remote the inference of physical science, the thing inferred is always a part of me, a possible set of changes in my consciousness bound up in the objective order with other known changes. But the inferred existence of your feelings, of objective groupings among them similar to those among my feelings, and of a subjective order in many respects analogous to my own,—these inferred existences are in the very act of inference *thrown out* of my consciousness, recognised as outside of it, as not being a part of me. I propose, accordingly, to call these inferred existences *ejects*, things thrown out of my consciousness, to distinguish them from *objects*, things presented in my consciousness, phenomena. . . . How this inference is justified, how consciousness can testify to the existence of anything outside of itself, I do not pretend to say: I need not untie a knot which the world has cut for me long ago. It may very well be that I am myself the only existence, but it is simply ridiculous to suppose that any body else is. The position of absolute idealism may, therefore, be left out of count, although each individual may be unable to justify his dissent from it.”

This airy distinction of “object” and “eject” does not in the least disguise the cardinal contradiction into which Prof. Clifford, in common with all subjectivists who shrink back from Solipsism, falls. Ejects, as he proceeds to define them, are simply “other men’s minds”; but other men’s minds are only known through their bodies, and their bodies are “objects” like trees or stones; while trees and stones are just as truly “ejects” from consciousness as are other men’s minds. In a word, ejects are objects, and objects are ejects; there is absolutely no distinction between them, on Prof. Clifford’s own showing; objects and ejects must be both objective or both subjective. Yet Prof. Clifford arbitrarily (it would almost seem wilfully) objectifies ejects and subjectifies objects! He flatly refuses to “untie a knot” which contains the whole point in dispute, and which the “world” has “cut” just as effectively for objects as for ejects; he coolly begs the

whole question, and repudiates the Solipsism from which his own principles permit no rational escape.

These illustrations of the self-contradiction of subjectivism are *typical*, not *sporadic*; they show how deep-rooted is the disease under which modern philosophy is suffering. Whenever (if ever) subjectivism shall dare to be rigorously logical, it will be the *reductio ad absurdum* of Nominalism, and compel philosophy to adopt Relationism and the scientific method in general. All science is of the universal; all sequent subjectivism abolishes the universal, and leaves only the individual, a solitary, unrelated, incomprehensible Ego. It avails nothing to create a phantom-science of the universal in a world of sensations alone; true philosophy, no less than true science, demands an explanation of that series of sensations which subjectivism can accept only as an unintelligible fact. Diogenes commanded a certain respect so long as he actually lived in his tub; but if, having fastened to his forehead a placard, "I am Diogenes, and I live in this tub," he had then tied the tub to his back, lived in a house, slept in a bed, and behaved like ordinary mortals, he would have been pelted with a storm of pitiless gibes from the keen-witted Athenians. And when philosophy, having tied the tub of subjectivism to its back, lives and lectures in a world of "ejects," and expounds to them a science of the objective relations they bear to each other and to an intelligible cosmos, human nature must have radically changed if philosophy fares any better.

It all comes to this; either the truth of subjectivism or the truth of science is a pure illusion. The possibility of the one is the impossibility of the other.

The conclusion just stated finds abundant corroboration in contemporaneous thought. Subjectivism in philosophy has created a new type of scepticism in science. Urged as it were by a consciousness that it can only maintain its own truth by discrediting the truth of science, philosophy does not hesitate to undertake the task. Hence it has formulated a law of philosophical scepticism under the name of the "relativity of knowledge," founded upon a truism, but distorted into a falsity. Unable to shake the conviction of the reality of a known objective universe, and therefore unable to take the field in its only logical form of Solipsism, subjectivism nevertheless covertly saps the truth of science in a manner which hides its own fatal inconsistency. It declares that all knowledge is merely relative to human faculties, and it adroitly pushes this principle as if relativity were unreality. A quotation from Mr. Frederic Harrison's essay on "The Subjective Synthesis" will well illustrate the mode of its attack:—

"The truly relative conception of knowledge should make us habitually feel that our physical science, our laws and discoveries in Nature, are all imaginative creations—poems, in fact—which strictly correspond within the limited range of phenomena we have before us, but which we never can know to be the real modes of any external being. We have really no ground whatever for believing that these our theories are the ultimate and real scheme on which an external world (if there be one) works, nor that the external world objectively possesses that organised order which we call science. For all that we know to the contrary, man is the creator of the order and harmony of the universe, for he has imagined it."

This subjectivistic scepticism, be it remembered, has its root in the Nominalism which universally prevails in philosophic circles, and which has profoundly affected those scientific men who, being more than mere specialists, have felt their influence; and it shows exactly where science must seek aid from a renovated philosophy, if it is to escape suffocation by the fire-damp of scepticism engendered by its own operations. "If every genus is only a mere word," says a writer in the *Encyclopædia Britannica*, "it follows that individuals are the only realities, and that the senses are at bottom the only sources of knowledge. And not only so, but on this theory no absolute affirmation respecting truth is possible, for such an affirmation involves of necessity a general idea, which *ex hypothesi* is destitute of real validity. Hence we have scepticism at the next remove." Mr. Harrison is an illustration of the literal accuracy of this statement. But the case is not bettered if the genus is "only a mere" *concept*, instead of "only a mere word"; for Extreme Nominalism and Conceptualism (the latter of which this writer accepts) are equally sceptical in their implications, since they equally disown the objectivity of relations. Only the theory of Relationism fully meets the case.

The doctrine of the "relativity of knowledge," under cover of which subjectivism makes its attack on the objective truth of science, undoubtedly rests on a truism: namely, that knowledge is itself a relation between the knowing and the known, and that nothing can be known except as it is known by the knowing faculties. This, surely, is a very innocent proposition. It simply means that man cannot know everything; it does not at all mean that he does not know what he knows. That human knowledge of the cosmos is incomplete, partial, inadequate, could be controverted only by a consistent subjectivist, to whom the cosmos is simply the sum of his own sensations or consciousness, which, again, exist only as they are known. But the doctrine of the relativity of knowledge, properly construed, has a real validity and profound significance to the objectivist, since it states the fact on which the total activity of science rests—the fact that human knowledge is small, and can be

increased. There is nothing whatever in this doctrine to discourage science or impugn the solid character of its acquisitions. From the very nature of the case, nothing but relative knowledge is possible. Increase the number and scope of man's cognitive faculties till his science becomes omniscience: his knowledge will still be relative, being the relation of knowing and known, and that unconditionally. In fact, "non-relative knowledge" is a contradiction *in adjecto*. As Prof. Ferrier puts it in his *Remains*: "To know a thing *per se*, or *sine me*, is as impossible and contradictory as it is to know two straight lines enclosing space; because mind by its very law and nature must know the thing *cum alio*, *i.e.*, along with itself knowing it". The doctrine of the relativity of knowledge, therefore, is a truism so far as it asserts the co-essentiality of subject and object to the relation of knowledge; it is a falsity and absurdity so far as it asserts the non-knowableness of the object by the subject in that very relation of knowledge. And the blade of subjectivism is shivered in its very grasp by the adamant shield of science.

Nevertheless it remains true that the progress of science is retarded and embarrassed by the prevalence of a philosophy which secretly undermines its results, controverts its fundamental postulate of the knowableness of the objective universe, and dooms it to an imperfect comprehension of the principles which alone justify its practical procedure. A philosophical vindication of those principles which should establish the scientific method, so resplendently successful in its empirical employment, upon an impregnable rational theory, could not fail in ten thousand ways to promote the advancement of knowledge, and dissipate that cloud which hangs over the deeper thought of our own age—the cloud of an intellectual consciousness at war with itself. Every attempt in this direction should be greeted with a hearty welcome.

Let us review the situation, and state the problem distinctly which Philosophy has now to solve.

Subjectivism in philosophy takes its stand, consciously or unconsciously, on Nominalism. Its fundamental principle is the law, accepted by both the Transcendental and Associational schools, that things conform themselves to cognition, not cognition to things. The necessary corollary of this law is the *separability of phenomena and noumena*, phenomena having their existence solely as modifications of the individual consciousness, and noumena either having no existence at all or else existing solely as the unknown and unknowable causes of phenomena. Of these two alternatives, the former alone is logically consistent

with the premisses of subjectivism; for, since "cause" is a universal term to which Nominalism denies all objective validity or significance, it is a term patently inapplicable to anything beyond the sphere of subjective consciousness. Hence the final outcome of all thoroughgoing subjectivism is absolute egoistic Idealism or Solipsism—a mere cosmos of objectively causeless dreams.

Objectivism in science takes its stand, consciously or unconsciously, on Relationism. Its fundamental principle is the law of Objective Verification,—that cognition must conform itself to things, not things to cognition. The necessary corollary of this law is the *inseparability of noumena and phenomena*, phenomena being the "appearances" of noumena, and noumena being that which "appears" and is partially understood in phenomena; and they have their inseparable existence, not only in the mind, but also in the cosmos which the mind cognises. The only utility in retaining the distinction at all is to mark the distinction between complete and incomplete knowledge—noumena being taken to denote things-in-themselves as they *exist* in all the complexity of their objective attributes and relations, and phenomena being taken to denote these same things-in-themselves so far only as they are *known* in their objective attributes and relations. The final outcome of scientific objectivism is a constantly growing knowledge of the real cosmos as it is, in which the human mind has its proper place and activity in entire harmony with cosmical laws.

This is the unequivocal issue between the two modes of viewing the universe which are confusedly and half-consciously struggling for supremacy in the modern mind. Philosophy is prevailingly subjective, but not wholly so; there are occasional symptoms of secret restiveness among philosophers under the iron yoke of Nominalism, such as the appeal of the Scotch School to "Common Sense," the "Natural Realism" of Hamilton, the "Reasoned Realism" of G. H. Lewes, the "Transfigured Realism" of Mr. Herbert Spencer, the "Inferential Realism" of Rev. J. E. Walter and many others, the unmistakably objective tendencies of the historian Ueberweg—who explicitly declares that "the objective reality of relations can be affirmed with at least as much reason as it can be disputed" (*Hist. Phil.* I, 374), and that "the demonstrative reasoning by which we go beyond the results of isolated experience, and arrive at a knowledge of the necessary, is not effected independently of all experience through subjective forms of incomprehensible origin, but only by the logical combination of experiences according to the inductive and deductive methods on the basis of the order immanent in things themselves" (*Ibid.* II., 162),—as well as of others that might be named in this connexion. But no one,

even among these uneasy insurgents against the established tyranny of Nominalism, seems to comprehend exactly what the tyranny or who the tyrant is; no one of them seems to have traced back the origin of his oppression to the half-forgotten decision, arrived at centuries ago by the now despised Schoolmen, as to the nature of universals; and no one seems to comprehend precisely what will free him from fetters that are invisible, yet strong as steel. Hence every one of them continually falls into concessions which rivet the fetters more closely about his limbs. The hostility secretly existing and working between the subjectivist and objectivist methods, even in one and the same mind, is one of the curious and striking features of contemporaneous thought, and will not fail to arrest the attention of the future historians of philosophy. Yet this antagonism between science and philosophy is really unnatural and injurious in the last degree, for they are the natural complements and allies of each other. Science needs the intellectual orderliness and systematic unity which philosophy alone can create; philosophy needs the verified basis and thoroughly objective spirit of science. Hence our age presents no problem more profound, in its nature, or more wide-reaching in its bearings upon the intellectual interests of mankind, than this:—

How to identify science and philosophy, by making the foundation, method, and system of science philosophic, and the foundation, method, and system of philosophy scientific.

The theory of knowledge which is predominant in both the Transcendental and Associational schools of modern philosophy has been clearly set forth in the preceding pages, traced to its source in the wrong answer given by mediæval Nominalism to the questions of universals, and shown to impart even to so-called modern philosophy a thoroughly Scholastic character. The theory of knowledge which underlies the practical procedure of modern science has also been clearly set forth, although only so far as its fundamental principle is concerned, under the name of Scientific Realism or Relationism,—the full development of which will involve the creation of a new and comprehensive philosophical system. The irreconcilable antagonism of these two theories, the disastrous consequences of it both to philosophy and science, and the necessity of a profound revolution in the method of philosophy in order to bring it into harmony with the now thoroughly established scientific method, have likewise been shown, together with the precise nature of the problem which philosophy has now to solve, in order to modernise itself in a true sense.

All that is here possible is simply to state the problem and

the general principle on which alone it can be solved; a full solution of it is the great desideratum of science and philosophy alike. For a full solution of it will permanently heal the breach which now disastrously divides them, and for the first time render possible the harmonious coöperation and concentration of all the powers of the human mind for the discovery, establishment and application of cosmical truth. What has been here done is to show that this greatest of modern problems is only, under a new form, that ancient and never satisfactorily answered question of Universals which, for hundreds of years, absorbed the brightest intellects of Europe,—to submit to the bright intellects of our own time, together with the old half-answers to that problem historically known as the theories of Nominalism and Realism, a third, new and full answer in the theory of Relationism,—and to inquire whether this theory will not suffice to bring about the greatly needed identification of Science and Philosophy.

FRANCIS ELLINGWOOD ABBOT.

II.—PERCEPTION.

THE problem of Perception is the most fundamental in philosophy. The various systems of thought, Idealism, Realism, Nominalism, Conceptualism, Materialism, Spiritualism, Scepticism, Criticism, &c., take their characters and designations from the various manners in which it is solved or attempted to be solved. Unfortunately it is a problem almost as difficult to state as to solve. Nor is this at all astonishing. A complete statement of it would be a solution of it, for the plain reason that the whole or nearly the whole of the difficulties connected with it arise from the indefiniteness of the terms in which it is stated, and must be stated. This indefiniteness is due to the fact that no terms have any definiteness except such as they receive in perception itself or in a theory of perception. While all other problems can refer for definitions of their terms to the theory of perception, the problem of perception itself has no such resource. Whence it follows that any statement of this problem is already an attempted solution, and that a complete solution is only a thoroughly comprehended statement. When, for example, we ask: How can an object manifest itself to a subject? or, How can a subject enter into and grasp the being of an object? we assume that we know exactly what subject, object and manifestation are, whereas the truth is that we have only a very imperfect and provisional knowledge of the meaning of these terms. If our knowledge of them were exact, the problem would be solved; for these terms have no meaning except as mutually related. A subject to which no object is manifested; an object which is manifested to no subject; a manifestation which does not manifest an object to a subject, are all contradictions in terms. It follows that, in tracing the history of the problem of perception, it is a matter of comparative indifference whether we consider the successive formulations of it or the corresponding solutions.

The problem of perception, being due to an extension of reflection beyond the ready-made objects of thought to the act whereby these become objects, necessarily appeared comparatively late in the involution of thought. Since, moreover, reflection always operates with forms determined by past experience, it necessarily endeavours to subsume every new object under forms so determined. Only when the new object persistently refuses to be so subsumed, does this resistance give rise to a new and adequate form in the mind. This process is often a very slow one, and the mind sometimes goes on for

centuries trying to subsume new objects, first under one old form, then under another, before it is brought to admit that an entirely new form is necessary. This has been conspicuously the case with the act of perception. Since the days of Parmenidès, when this act first became an object of thought, down to the present, attempts have been made to subsume it under some form determined by experience of objects due in part to the operation of this act, but not including it—at least explicitly. In other words, all the solutions hitherto proposed of the problem of perception have been attempts to subsume perception under one or more of its own objects not including itself. If ever the problem is to reach a definite solution, this solution will be a mental form adequate to the act of perception.

Few things are more persistently misunderstood than the nature and limits of scientific solution, and the reason why solutions are demanded. The demand for a solution or explanation always implies that some fact or group of facts, as known, does not satisfy the conditions of thought, in other words, does not form a complete object and must, therefore, be supplemented by something sufficient to convert it into such. It is clear that nothing could present itself as a problem to a mind that was not conscious, at least in an implicit way, of what it required to constitute a complete object of thought. We could never know that a thing was a part and required to be supplemented, without knowing what was meant by a whole. We should never know, for example, that an accident could not exist apart from a substance, an act apart from an agent, an event apart from a cause, &c., unless accident, act and event were recognised as only parts through comparison with a whole. It is, of course, not necessary that *the* whole, whereof they are parts, should be before the mind, but merely that the general type of wholeness should be there. In respect to objects recognised as complete, that is, as subsisting by their own act, there is no problem possible. A problem always sets out with certain known facts and then asks: What must be added to these facts in order to convert them into a complete object? It is this supplementary something, which, when found, is the solution, converting the problem into a theory. But here it may be asked: How do we recognise a complete object of thought when we find it? Evidently, only by seeing that, however reflected on, it does not develop *necessary* relations to any other, in other words, that it might and would exist unchanged, even if everything else, including ourselves and the act whereby we think it (unless, of course, the object is that act), did not exist.

But here we must be on our guard against those philosophies

which try to show that, according to this view, there is but one complete object possible, *viz.*, the Absolute. This doctrine, which conducts directly to pantheism and fatalism, is due to two confusions, neither of which is difficult of detection. The first is a confusion between a complete being, which, as self-subsistent, is not predicable of anything (*οὐτ' ἐν ὑποκειμένῳ ἐστὶν οὔτε καθ' ὑποκειμένου τινὸς λέγεται*); and the idea of complete being, which, as merely a standard of completeness, is equally applicable to complete and incomplete being, to aggregates of either or both, and even to the negation of being. Indeed, without it, the negation of being would be impossible. When the latter is substituted for the former, it gives a being determined by all possible attributes, compatible and incompatible, a being so complete as to exclude every other. This being, necessarily designated by negative terms, is, of course, unthinkable; nevertheless, like the square circle, it can be infinitely talked about, a fact which explains why the Absolute is so often said to be inscrutable. Plainly, the unthinkable and self-contradictory, if held to exist, will remain for ever inscrutable. The second confusion, in great measure due to the first, is that made between the immanent, self-complete act by which beings exist, and which makes them adequate objects of thought, and the transient acts whereby these beings relate themselves to each other. When these latter are substituted for the former, all beings seem to merge into one, and the only object that remains for thought is a boundless universe of transient acts performed by nothing—an infinite becoming. It is these two confusions that lie at the basis of materialistic evolutionism and idealistic self-determinism. Indeed, Hegel, the prince of confusionists, glories in both in their worst form; to such an extent that he expressly identifies being, or the self-sufficient act, with nothing or the absence of all act, and both with becoming, which is a transient act. Like his predecessors, Kant, Fichte, and Schelling, he includes the immanent act of the subject and object of thought in the transient act whereby, as such, they are related, and thus turns thought into a series of relations that relate nothing. The truth is, that the Absolute, so far from being the only complete object of thought, is no object of thought at all. Indeed, there is no such thing as an Absolute, an Infinite, or even a Universe, except in this sense that the notion of being, which is necessary to every object of thought, is of unlimited application.¹ All objects of thought

¹ There is a great deal talked about "universal ideas". The phrase is a contradiction in terms. All ideas are singular; it is only their application that is universal.

are finite,¹ and when adequate are conceived as self-existent and independent. That they should have any numerical limit seems in no way necessary. In respect to such adequate objects, there is, as we have said, no problem possible. A problem always deals with the transient acts, whereby one such object relates itself to another, and is completely solved only when this act is so supplemented by the objects which it relates, as to be a complete object of thought. In other words, a problem is solved only when the act constituting the relation in question is seen both as it is in its principle and in its term, and seen to be grounded in and determined by the essential and permanent nature of the two. A solved problem, that is, a scientific theory, therefore, contains five elements: (1) a relation, which is always a transient act, (2) the principle of this act, (3) the term of this act, (4) the mode of the principle as determined by the act, (5) the mode of the term as determined by the act; and these must in no way be confounded with each other. A problem as propounded may contain more or fewer of these elements; what it demands in every case is that the rest should be discovered. So long as one of them is missing, so long the conditions of complete thought are not satisfied and so long there is no complete solution or comprehension. If we apply these results to the problem of perception, we shall see that a solution of it must consist in discovering a permanent principle whose act perception is, a permanent term in which that act ends, the mode of the principle as determined by the act, and the mode of the term as determined by the same. The problem in question may be propounded in many ways, according as we suppose we know more or fewer of the elements that enter into the solution; but since each of these elements must necessarily appear in perception itself, when thoroughly integrated and analysed, its most correct form is: What is perception? If we hold before our minds the notion of perception, until we bring into clear consciousness all that is necessary to make it a complete concept, and then carefully analyse that concept, we shall arrive at a full solution of the problem.

This method of dealing with it is, unfortunately, very different from that which has been pursued hitherto. If we look back

¹ It will probably be said that we cannot think a finite without thinking the infinite along with it. If repetition by reputed authorities could make a statement true, this ought certainly to be so. Nevertheless, it is profoundly false. We might as well say that we cannot think the thinkable without thinking the unthinkable, which is a manifest absurdity. Indeed the whole doctrine that we cannot think a thing without thinking its negation is due to a confusion of separating perception with distinguishing reflection.

over the history of the problem, we shall see that all who have attempted to solve it, have sought to do so by a process of synthesis, by the identification of certain elements tacitly assumed as given outside of perception. Indeed, in all cases, identification, in the form of mechanical interpenetration, has been assumed as the explanation of perception. It seems to have been supposed that if we could show the thing known to interpenetrate the thing knowing or otherwise to form a continuous unity with it, there would be no further difficulty. Naturally enough, this notion finds its most naïve and undoubting expression in Parmenidês to whom the problem of perception seems first to have propounded itself. This philosopher tells us in so many words that "thinking and being are the same thing". Empedoklês is governed by the same assumption, when he tells us that "we see earth with earth, water with water," &c., and Plato, even after having, in the most inconceivable way, furnished the mind with all possible ideas, finds no other way of bringing the external world into connexion with these than by positing the same identity. The eye is able to see only because the fire or light contained in it goes out to meet, and identify itself with, the light radiated or reflected from external things (ἐκπίπτων ὅμοιον πρὸς ὅμοιον, *ξυμπαγὲς γενόμενον*, ἐν σῶμα οἰκειωθὲν συνέστη. . . . ὁμοιοπαθὲς δὴ δι' ὁμοιότητα πᾶν γενόμενον, κ. τ. λ., *Τιμαῖος*, 45, C.). Aristotle is entirely right in attributing to him the dictum, *Similia similibus cognoscuntur* (γινώσκεσθαι τῷ ὁμοίῳ τὸ ὅμοιον, *De Animâ*, A, 2, 7; 404 b. 16 sq.); but even Aristotle himself is completely in thrall to the same prejudice.¹ Although he has much to say of the manner in which the external world finds its way to the soul, he knows no other way of explaining how it is cognised when it arrives there than by saying that it identifies itself with the soul—the sensible with the sensitive soul, the intelligible with the intellective soul. His notion is that external things present themselves to the senses, and are *felt* by being identified with these; their forms then pass on to the intellect and are *cognised* by being identified with the forms of it. The soul, therefore, in a certain sense, is everything. This absurd result, of course, follows directly. If like can be known only by like, everything that is known must have its like in the soul; in other words, the soul must be a microcosm. Being such, why it should trouble itself about the macrocosm, which after all

¹ Ἡ ψυχὴ τὰ ὄντα πῶς ἐστὶ πάντα. ἡ γὰρ αἰσθητὰ τὰ ὄντα ἡ νοητά, ἔστι δ' ἡ ἐπιστήμη μὲν τὰ ἐπιστητά πῶς, ἡ δ' αἰσθησις τὰ αἰσθητά, *De Animâ*, Γ, 8, 1; 431 b. 21 sqq. Ἡ ἐπιστήμη τῶν καθόλου· ταῦτα δ' ἐν αὐτῇ πῶς ἐστὶ τῇ ψυχῇ, *Ibid.* B, 5, 6: 417 b. 22 sq. Ταῦτόν νοῦς καὶ νοητόν, *Metaph.* XI., 7; 1072 b. 20.

can be known only in so far as it is identical with the microcosm, seems a mystery. If the bigness of the macrocosm can be known only through the bigness of the microcosm, it is hard to see how the difference in bigness could be discovered.

The Parmenidean doctrine, that the mode of perception consists in the identity of subject and object ran through the whole of ancient philosophy, as well as through that ancillary continuation of it known as Scholasticism. It is nowhere more strongly affirmed than in Plotinus and in Thomas Aquinas. The former tells us "Being and intelligence are one nature" (*Enneads*, V., 9, 8); the latter, that "the sensible in act is the sense in act, and the intelligible in act, the intellect in act" (*Sum. Theol.* I., 14, 2, c). It is this doctrine that lies at the basis of all the mysticisms which for more than two thousand years have exercised, and which still exercise, so profound an influence upon all fine minds that have not sufficient vigour to make clear to themselves the meaning of imposing, time-honoured phrases.

It is the same doctrine, expressed in a slightly different form, that pervades and shapes the whole of modern thought respecting the nature of perception. Though the psychological method of modern thought began with Descartes, it was by Locke that it was consistently applied to the facts of consciousness and made to evolve the principles whereby the course of that thought has been determined. As against ancient philosophy, Locke's system seemed a great simplification. The Peripatetics and, after them, the Schoolmen had assigned to the mind two sets of cognitive faculties, those of sense and those of intellect, with corresponding terms in the outer world, the sensible or particular, and the intelligible or universal. These faculties and terms had been assumed as given, and no inquiry had been instituted as to their nature or genesis. And this was natural enough; since the question that formed the spring of ancient thought was essentially different from that which keeps modern thought in motion. The former asked: Since all *things* that we see, hear, touch, smell, taste, are in motion (*πάντα χωρεῖ*), whereas knowledge (*ἐπιστήμη*) implies fixity, how can there be any knowledge? The reply, hinted at by Hêrakteitos, when he said: "Eyes and ears are evil witnesses to men with barbarous souls," was clearly pronounced by Plato, who said: "Though things heard, seen, &c., move, their ideas do not, and these alone can be known. Sense is not knowledge, but a mere spur bringing to remembrance forgotten ideas. The intellect alone knows, and it knows only eternal ideas." This reply rescued the possibility of knowledge, only by making man a fallen creature, abandoning the world of sense, in which he has

to live and act, as a deluding shadow, and creating or imagining a supersensuous world, which in some mysterious way he had once known, but which, in some equally mysterious way, he had come to forget. As a dream or a romance, this was not very bad; to be considered as anything else it has no claim. Aristotle deprived this reply of its romantic shape, without altering its nature. He merely made Mind (*Noûs*), instead of heaven, the *locus* of ideas (*τόπος εἰδῶν*), plunged duplicates of these (*λόγοι ἔνυλοι*) in matter, and asserted that the former recognised the latter by identification. This was the best answer that the ancient world was ever able to give to the fundamental question of its philosophy. All the subsequent thought of antiquity and the middle ages was devoted to attempts to make this answer intelligible. These attempts, utterly and uniformly abortive, in spite of endless subtleties and the invention of some half dozen distinct intellects with distinct functions, finally led to the question which underlies all modern thought: What is knowledge?

As soon as this question was propounded, the faculties of the mind and their terms could no longer be taken for granted without examination. Locke saw this very clearly and accordingly undertook to give an account of knowledge without assuming them. Unfortunately, however, he adopted an utterly false method of procedure, and one which the experience of ages might have shown him was futile. Instead of taking one act of knowledge and placing it under his mental microscope or in his mental crueible, he began in the old way with what, without any authority, he assumed to be the factors of knowledge, and tried to see whether he could not, by making these unite or interpenetrate, produce perception and knowledge. These factors were not only fully organised products of the very act he was trying to explain, but they were the results of one unacknowledged and most incorrect dismemberment of that act. In other words, Locke, instead of analysing thought to find out its factors, undertook to construct thought out of what, without scientific analysis, he supposed to be its factors. It was just as if, in order to find out the nature of wine, he had said to himself: "Wine is a red liquid; let me see how water and red ink must be put together in order to make wine." He said: "Knowledge is the effect produced upon a sensitive tablet partly by external things and partly by itself. Let me see how this effect is produced." How it was produced he never did see and never could see, and his conclusion was: Knowledge is made up of ideas of sensation and ideas of reflection. Of course, such a theory could be made plausible only by the surreptitious use of a whole series of unacknowledged and

unexplained thought-factors; but Locke was not sufficiently skilled in the analysis of thought to discover this. Indeed, it was not discovered until Kant came. Meanwhile, however, other thinkers, setting out with Locke's principles or prejudices (for they are nothing more), showed that, in accordance with these, there was no need for assuming either a tablet or anything making impressions upon it; that impressions themselves, in a more or less vivid guise, coupled with certain fictions or tendencies to feign, were amply sufficient to account for the facts. The drawback to this conclusion was, that, instead of explaining knowledge, it proved that knowledge was all fiction. This was Hume's result, acknowledged and set forth as the highest wisdom. The truth was, Hume tried to construct thought out of the matter of thought alone, using, indeed, its forms, because otherwise he could not have spoken, but calling them fictions and delusions. How they could be fictions, since there was no mind to feign, or delusions, since there was no mind to delude, will ever remain one of the mysteries of wisdom. Hume's result, absurd as it was, was, nevertheless, not without great value. The pity was that he was not more generous with his fictions. Naturally enough he tried to be sparing with these, since otherwise his system would have lost all its plausibility. Still, it was a most valuable thing to have shown that thought contains "fictions," which can in no way be referred to, or accounted for by, impressions, and that without these fictions thought would be impossible. It was upon these fictions that Kant laid hold and built up his system. Instead of trying to limit their number, he looked about everywhere in order to find them and make a list of them, and, instead of considering them fictions, he called them forms of thought, carefully to be distinguished from its matter. His search for these "forms" was so productive that, when his list of them was complete, he could not tell what was left as matter. In fact, matter became as much a thing of desperation with him as form had been to Locke. He could not exclude it, and yet he could tell nothing about it. So far he was inconsistent. Hegel tried to do for Kant, what Hume had tried to do for Locke, *viz.*, to make him consistent. In other words, he tried to construct cognition, that is, the world as it appears in thought, out of the forms of thought alone. In his system, therefore, thought and the universe are convertible terms: thought is being. In this doctrine, which lies at the basis of Hegel's entire system, the old notion of Parmenidês reappears as the result of more than two thousand years of thinking. Hegel made a desperate attempt to justify it, by denying the principle of con-

tradition and thereby implying that there was no such activity as thought at all.

The course of thought up to the time of Hegel's death had conclusively shown two things, *first*, that cognition could not be explained by the identification of its principle and term, and *secondly*, that it could not be explained by identifying its matter with its form. It is one of the unaccountable things in the history of thought, that these results, clear and undeniable as they both are, have had almost no effect in calling forth fresh attempts to make clear the nature of cognition or perception. Instead of this, they have rather tended to disgust thoughtful people with the entire problem, and make them turn from it to a consideration of the physiological conditions of perception. The strangest thing of all is that not only Locke and Kant, but even Hume and Hegel, who reduced the systems of these to most patent absurdity, still find followers. The only person who seems to have profited by the results specified, was Rosmini, the chief catholic thinker of the first half of this century. This philosopher, after carefully studying the entire history of the problem of cognition and observing wherein the attempted solutions of it had failed, resolved to subject cognition¹ to a fresh analysis, and to report carefully what elements he found in it, and how he found these elements connected. The result was an entirely new theory of perception, or, which is the same thing, of the origin of ideas. This theory, with very slight modifications, seems to answer all reasonable requirements.

In undertaking to study perception, we must begin by accepting it as it is and, comparing percept with percept, try to find out what they have in common. This common element will of necessity be what is essential in perception. Now, even a very slight consideration shows that every perception, even the simplest, is a virtual judgment in which some attribute is asserted to form part of a given concept. In by far the majority of perceptions, the concept which forms the subject of the judgment and the attribute which forms its predicate are previously known, and are only *recognised* in the act of perception. But, since all such concepts and attributes could not have been previously known except by acts of perception, the question returns with regard to them, and repeats itself until we come to a perception such that neither its subject nor its predicate could have been perceived separately—a perception whose subject and predicate must have come into consciousness in the very

¹ Throughout this paper I have used the terms *perception*, *cognition*, and sometimes even *thought* as synonymous. This is not likely to lead to any confusion, so long as we are dealing merely with the constitution of thought.

act of judgment which first pronounced them. What this perception is cannot be a matter of doubt. It takes the form: *This is*—a judgment in which *this* represents a felt entity, and *is* the same entity as distinct from feeling, or as performing an act which is not felt. This means that even in the simplest act of perception there is not only feeling, which by itself can never be an object and therefore by itself never can be known, but also another element which serves to convert feeling into an object. What this element is, is sufficiently clear. It is what we name *being*. Everything that is perceived must *be*, and being is what is essential to an object.

A simple perception, then, is a felt entity or an existent feeling, of which neither element can be known by itself. It is, moreover, true that a single such perception would not constitute knowledge in the ordinary sense of the word. It would merely constitute what in Aristotelian language would be termed *δυνάμει ἐπιστήμη* or potential knowledge; in other words, a mind: for what else is a mind but an existent feeling? There is a great deal said at the present day against such notions or expressions as 'potential knowledge,' and those who use them are accused of committing the absurdity of going behind consciousness. There is not the slightest absurdity about the matter. In a certain sense, consciousness goes behind itself every time that it reflects upon one of its past states, and it is in no other sense that it goes behind itself when it recalls its potential state. It is quite true that I never could have known one, *as* one, without knowing two; but it is equally true that I never could have known two without *first* knowing one; for *two* means nothing but *one* repeated. The truth is there are two kinds of knowledge, the one potential or *anoetic*, and the other actual or *dianoetic*. The one that is known before two is known *anoetically*; the one that is known after two is known *dianoetically*. When I know one *dianoetically*, that is, know it *as* one, in opposition to two, I can easily go back and see that I knew it before two, although only *anoetically*. In the same way, although a single perception does not constitute knowledge in the *dianoetic* sense, there is no reason why such knowledge, after it is constituted, should not go back and recognise that there was a first perception which formed the condition of all others, and which remains an essential constituent of all the others, or why it should not be able to analyse and consider that first perception. Such analysis shows that the first perception is an existent feeling, in other words, a permanent reality.

Such a reality, if left to itself, might, and certainly would, remain for ever without what we call actual knowledge or self-

consciousness. In other words, it would remain for ever utterly incapable of giving itself determinations or creating in itself distinctions of any kind. It is only when several such realities coexist that such distinctions or determinations appear. In dealing with the relations of realities at this stage, we must divest ourselves of the notion that these exist outside of each other or inside of each other in *space*: if they did, they would certainly never relate themselves to each other. As we shall see, actual space is the result of their relation, not the condition of it. The only relation in which realities stand to each other, is that which is really the foundation and type of all relation, *viz.*, reciprocity of action and passion. This relation is clearly founded in the nature of feeling, which always has an active and a passive side, and cannot be any further analysed or reduced. The Schoolmen held that *actio sequitur esse*, and they might likewise have said that *passio sequitur esse*; but it does not follow that, when two realities relate themselves, their actions or their passions will be the same either in degree or in extent. It does not even follow that the action which the one exerts upon the other will be returned to the actor, and, even if *some* action be returned, it may be different both in kind and degree from that originally exerted. There is no reason to assume that all realities are similar. What happens when one reality relates itself actively to another is this: A modification takes place in the feeling, and a determination in the being, of that reality. A metamorphosis, equivalent to the birth of consciousness, then follows. The reality divides itself into feeling principle and felt term, and these, as clothed with being, so to speak, become respectively subject and object. The felt term invested with being appears as infinite and eternal space. Hence the new modification appears as a limited object in space and time. In fact, it turns out that the primitive perception contained, in an anoetic or potential form, what now shows itself to be an intelligent and sentient subject feeling infinity and intuiting eternal being. Of course, these elements of perception appear at first in a most confused state. It is long before they become entirely and distinctly defined in consciousness; indeed, in most consciousnesses they rarely become defined at all, although the names for them are familiarly used. With the great mass of mankind the modifications of the primitive perception are all that are ever cognised: the elements of that perception itself remain to the last in a half-anoetic state. They are brought out only when men begin to philosophise, and it is only the smallest portion even of professed philosophers that attain clearness with respect to them all. How few, for example, are able to

see that the primitive perception contains implicitly both infinity and eternity!

From the point of view of the ordinary theories of perception, it is not difficult to formulate objections to that here proposed, especially as it is set forth in a narrative rather than in a genetic way. A few of these objections may be glanced at.

First, it may be said: "Space is not a feeling; all feelings are necessarily limited and space is unlimited". This objection contains a *petitio principii*. Space, *as thought*, is, of course, not a mere feeling, but feeling inherent in being, which makes it an object. If, apart from being, it is not a feeling, it is nothing. The peculiarity of space is that every assignable part of it is outside of every other; but such outsideness could never be recognised except by something that felt all the parts at once. Moreover, that all feelings are limited is a mere assumption. Feelings would never be recognised as having a common element or be classed together, unless they were all variations of a single feeling, which single feeling, therefore, cannot be limited. Limit, which is itself a feeling, always implies that there is something beyond it.

Secondly, it may be said: "Being is neither an intuition nor is it eternal: it is a mere abstraction from feeling or sensation". Now, it is tolerably evident that we cannot abstract from a thing what is not in it, and being is not in feeling; still less is eternal being. No man ever felt a past or a future feeling. Feeling, *as such*, is therefore confined to the present, whereas being cannot be thought except as without beginning or end in time. It is utterly beyond our power to think time without being. But, if being is not in feeling, it must be presented to the mind in some other way. That other way we call intuition. If it be said that intuition itself is a kind of sensation, the reply is that the two differ as the absolutely permanent differs from the absolutely transient, and that the one is by itself intelligible, while the other is not. There are other differences.

Thirdly, it may be objected that, on this theory, all thought remains purely subjective and that each reality never can know anything more than its own modifications. It is just the merit of the theory that it meets and overcomes this difficulty, which must for ever remain insoluble to any theory that would construct thought out of feeling alone. A feeling, a modification, as such, is not an object and, therefore, can never be perceived. In order that it may be perceived it must become an object, that is, it must be placed outside of the subject and, so to speak, looked at. But since it cannot be placed outside of the subject as passion, it must be so placed as action. Hence, to make feeling an object means to intuit the other, that is, the active

side of it. But to see anything as action means to see an agent performing; hence, in perception there is always seen an agent which is not the perceiving subject—unless, of course when that subject is itself the object of perception. It is one of the most evident things in the world that the notion of action could never arise from feeling, even if, *per impossibile*, that could be objectified by itself. Feeling, as such, is pure passion,¹ and even if it could be made permanent and examined, it would not be found to contain action. Action can be only intuited, and it is just this *intuition* of action, or of an agent in action, that is the essence of perception as distinguished from sensation: it is this that enables the subject, so to speak, to go outside of itself. This phrase “to be outside of itself” is a great bugbear to most people, who understand it to mean, to be in a different part of space from that which it occupies, while still occupying the latter. This, of course, is a pure impossibility. But, plainly, that cannot be in two spaces which is not in space at all, space being, on the contrary, in it. When it is said that the subject goes outside of itself, all that is meant is that it intuits something different from itself, and that this is intuited as action. The instant we say that anything *is*, that same instant we are outside of ourselves, as subjects, and looking at things as acting upon us. All action, as seen in its purity without determination, is being. It may, therefore, be said that the first perception, the first anoetic reality, contains in itself the essence of being, or, in other words, that the mind, from its very constitution, has a permanent intuition of pure activity. This activity becomes determined for it by feeling. It is this curious state of things that has given rise to all the innumerable discussions concerning the notions of Substance and Cause. Those thinkers who hold that all knowledge is feeling in some form or other, cannot, of course, find any explanation of these notions, and are, therefore, obliged to throw them away as mere meaningless fictions or, at best, as reducible to mere succession of feelings. The truth is, substance is being in its simple immanent act, or in its relation to space, whereas cause is being as related to particular feelings.

Fourthly, it may be objected that, from this point of view, there can be but one being in the universe. This does not follow in the least. What is true is that there is but one essence of being in the universe, which means that, if we remove all the determinations which make distinct beings what they are, being will

¹ See an excellent essay on “The Feeling of Effort,” by William James, M.D., in the *Anniversary Memoirs of the Boston Society of Natural History*: Boston, 1880 (summarised in MIND XX. 582). It is there shown that we never feel activity as such.

be a simple anoetic unity. But this is a mere paltry tautology, which may be expressed otherwise, by saying that being, before it is predicated, is one, whereas, after it is predicated, it is many, or by saying that being is a unity only through indistinctness. Allusion has already been made to the evil effects of the confusion between predicated and unpredicated being.

Fifthly, it may be urged that our theory confounds time with eternity. This must be admitted and defended. Time and eternity are the same. But it will be said that time passes and that it is the very essence of transience, whereas eternity is an everlasting now. The answer is that time does not pass, that time has neither past, present nor future. Time remains, and things, that is, feelings pass in it. It is the condition of transience, but not transience itself. How could I ever know a thing as past, if the time in which it happened had utterly vanished? The truth is, there is a most inveterate confusion prevalent with reference to the nature of time. This confusion has arisen from a very loose use of the word *time*, which is often taken to mean groups of feelings related to each other as causes and effects, or as successive *in* time. In this way we speak of yesterday, to-day and to-morrow as portions of time, whereas we really mean that they are certain groups of events that happen *in* time. Without these events there would be no yesterday, to-day or to-morrow. When we think we are measuring time, we are merely measuring the rapidity with which events pass *in* time. Everything that passes, passes with a certain velocity, which may be measured by comparison with other velocities. But we cannot measure the velocity of time. We can never say: Time moves faster or slower than this bullet, than the sun, than the hands of a clock. It requires only a very slight consideration to see that if time passed, there could be no difference of velocity in anything, and, indeed, that consciousness would be utterly impossible. It is because feelings, which are absolutely transient, are seen in time or in eternal being, which does not pass, that they are known. There are numerous other arguments which go to prove that time does not pass.

Sixthly, it may be said that our theory does not account for the origin of mind. This likewise must be admitted, and the rejoinder added, that any theory which accounted for the origin of mind would be accounting for what has no origin. How can that which in itself contains time have an origin in time? Our theory shows its *constitution*.

Seventhly, it may be said that our theory does not account for the manner in which external things communicate with the mind, or show the bridge between them. Such an objection would only show that the theory had been completely misunder-

stood. External things are external only in so far as they are in communication with the mind, and it is this communication that constitutes their externality. The objection ought rather to take the form : How can anything known be external to the mind ? an objection which is in effect only a statement of the old puzzle of Parmenidês : How can I know except by being what I know ? This puzzle is sufficiently answered by the counter inquiry : How can I know anything if I am that thing, seeing that in that case there is no object and no subject of knowledge ? It is, as we have seen, of the very essence of perception that the subject should by an intuition go outside of itself. The whole physiological inquiry in regard to the functions of brain and nerves in perception goes to show that they are merely means whereby the influences of one reality upon another are increased, separated into classes and directed, but lends not the least aid in showing how these influences are appropriated by the mind as objects. It is a curious thing that when the brain and nerves are in a healthy state, they are themselves no objects of perception to the subject that uses them, and that they never at any time show the real influence which they serve to communicate. For example, no examination of them shows how they convey the sensation of heat, of colour, or of sound. Such examination at best only shows that, while engaged in this conveyance, they are subject to certain forms of motion, which have nothing in common with any one of the sensations named.

Eighthly, it may be urged that our theory does not account for the categories, quantity, quality, relation, morality, and their subdivisions, in accordance with which the perceptions are determined. It may be replied that there is no need to account for these any more than for any other ideas, inasmuch as they are all contained in perception itself, either in the primitive perception or in subsequent ones. Kant's table of categories is a confused and clumsy affair, very much inferior to Aristotle's, in spite of the contempt which Kant poured upon the latter ; and the fundamental Kantian assertion that these categories come from the subject is denied by the simplest utterances of consciousness. Indeed, the categories are merely the elements of perception itself—being, feeling, and the relations in which feelings stand to being and to each other through it. And this naturally leads to the question how ideas are formed.

In answering this question we must carefully distinguish between those ideas that belong to the original perception and those that are formed afterwards. The first are what are usually termed the categories, the latter, what are usually termed ideas. As we have seen, the primitive perception is an existent feeling ;

whatever, therefore, can be analysed out of being, (indeterminate) feeling, or out of the two together is a category. Out of feeling, by itself, nothing, of course, can be analysed, inasmuch as by itself it is nothing for thought. We may, therefore, say that the categories are what can be analysed out of being or feeling as being. Out of being may be analysed¹ unity, totality, possibility, necessity, infinity, eternity: out of being, as felt, may be analysed, reality, cause and effect, substance and attribute, passion and action, subsistence, space, universality, reciprocity, limitability. Ideas, in the ordinary sense of the word, are as numerous as feelings or possible unities or combinations of feelings. Every feeling, as known, is a determination of being, and every such determination is as permanent as being itself, being nothing more or less than a possibility. The nature of being forbids certain combinations of feelings, such as a red green, a round square, &c. Such combinations of words correspond to what we call impossibilities, and involve what we call contradiction.

But it may be said: If all ideas are determinations of being, how do you account for negative ideas? This question is easily met by the affirmation that there are no negative ideas, and that there is no need to account for that which is not. What are sometimes called negative ideas are mere negations of ideas, that is, mere acts by which ideas are removed from before the mind. There is no idea corresponding to not-white, not-square, not-soul, not-body, not-extended, &c. It is true that many ideas which are very positive are frequently mistaken for mere negations of ideas, for the reason that they have correlates which are more prominent in consciousness than they. Infinite, for example, is a most positive and fundamental idea, without which there could be no thought; inasmuch, however, as it comes into dianoetic consciousness late, and on the occasion of an act denying limitations to being, it receives a negative name. It is, in truth, being itself, after all limitations or determinations are removed. Had it come, as being, into consciousness before anything else, that is, before limited things, these would have been termed non-beings—*μη ὄντα*, as, indeed, several of the ancients saw with tolerable clearness. Still they would not have been mere negations on that account. There is a long way between the negation of the fulness of being, that is, determination, and the negation even of determinate being, that is, nothing.

¹ That which can be analysed dianoetically out of a thing must from the first have been in it anetically. Of course, none of these categories come into clear consciousness until after much experience. We always use categories before we are conscious of them.

Again it may be said : If all ideas are objects of thought, how do we ever arrive at the idea of a subject ? This, at first sight, seems a very puzzling question, but is, in truth, a very simple one ; for every idea is an idea of subject. That is to say, while the idea is an object, that whereof it is the idea, the *ideatum*, the reality given in feeling, is always a subject. In every idea, therefore, there is contained subject and object. Unfortunately, since the days of Kant, there has grown up a use of the words *subject* and *object* which makes the former equivalent to *that which thinks*, the latter, to *that which is thought*, and this causes a real difficulty, inasmuch as there is no seeing how that, whose very essence it is not to be an object, can ever be an object. To say that we objectify that whose nature it is not to be an object is like saying that we make the square round. If, however, we use *subject* and *object* in their true and original signification as *ideatum* and idea, all difficulty vanishes. Great care must always be taken to avoid the modern confusion between subject and *ego*, which has done so much mischief in thought. Every *ego*, to be sure, is a subject ; but every subject is not an *ego*. Every subject, moreover, is an object, at least anobjectically, else it would not be at all ; but even every subject-object is not an *ego*. An *ego* is a subject, the principle and term of whose reality are both in itself. This statement does not at first sight seem very intelligible ; a little explanation will make it more so. When I perceive this pen with which I am writing, I do not refer the principle of the feelings which for me form its reality to the same entity that feels them. In other words, I refer the feeling of reality to two distinct entities, conceived by means of two different acts. When, on the contrary, I perceive what I call myself, I refer both the principle and term of the feeling which constitutes the reality of the percept to the same entity. In other words, the *ego* is a reality whose principle and term are both referred to the same entity.

From this view of the nature of the *ego* there results an insight into the limitations of real knowledge. There is an old saying : "Every heart knoweth its own bitterness," which carries with it the implication that no heart knows the bitterness of another. And this is true in a very extensive sense. Feeling is utterly incommunicable, and hence all knowledge, in so far as it is dependent upon feeling, is likewise incommunicable ; and this must eternally remain so, unless, as the Hegelian article of faith is, all realities are one reality, and there is but one subject in the universe. But as long as there is a multiplicity of realities, it is entirely evident that one can never feel the feeling which another has of itself. This at once explains why all external things seem impenetrable to us, and why, on the

contrary, when we think ourselves, there seems nothing to penetrate. This explains also why we find matter in everything. Matter is simply those feelings which realities have of themselves but which are impenetrable to other realities.

In this proposition it is taken for granted that every reality has a feeling of itself, or, in other words, that all nature is animate, a conclusion which natural science is gradually reaching by mere experiment. One thing is entirely clear, *viz.*, that if there were anything in nature besides sentience and being, we should never by any possible method become acquainted with it, since feeling and being constitute the sum of knowledge. Hume used to ask, when any idea was presented to him: To what impression of sense does it correspond? and if it corresponded to none, then he rejected it as a fiction. These fictions, substance, cause, &c., are all to be found in being, that element of knowledge which Hume entirely ignored, and to replace which Kant invented his table of categories. Feeling and being, therefore, are the constituents of knowledge; to these all knowledge must finally be reduced, and in terms of these it must be expressed. Any attempt to express these in terms of anything else is not only futile but foolish—futile, because everything else is but a combination of them, more or less complicated and indirectly known; foolish, because these are known immediately and without the aid of anything else. It follows that the universe must be explained in terms of sentience and being, not these in terms of matter and motion, as is usually done, and that materialism is a logical blunder of the very worst kind, equalled only by the blunder of idealism.

In conclusion, we may offer a definition of perception. Perception is the *intuition* of feeling as a relation of activity and passivity between two entities, each of which has that permanent act which we call being. Intuition, therefore, and not identity, is the essence of perception. Without intuition there would be no identity. The latter may be explained in terms of the former, not *vice versâ*.

THOMAS DAVIDSON.

III.—CAUSATION AND ITS ORGANIC CONDITIONS.¹

IV.

I THINK we may consider ourselves well rewarded for the somewhat strenuous effort to discover the import of organisation amidst the intricate complex of powers which co-operate in the manifestation of the mental presence. We have climbed to a point from which we can take a bird's-eye view of Causation. Before us lies the wide, entrapping labyrinth of natural interaction; and it is interesting to notice the many ventless windings in which those philosophies found themselves entangled that sought to thread their way without the help of organic realisation.

The presence of mental states, and their actual mutations, is all we are immediately cognisant of. By dint of inbred impulse we feel instantly compelled to attach a transcendent meaning to these mental states and their changes. They peremptorily signify to us the characteristics of existences, which they are not themselves constituting, but merely more or less distinctly denoting. The most distinct of all mental states, the so-called percepts, seem so thoroughly and immediately indicative of something beyond themselves, of some other existent forcing itself then and there into consciousness, that we cannot help hypostatising an external presence as cause of their appearance. Indeed they seem to have their true existence so completely outside our mind, that we unhesitatingly take them in the gross for foreign objects, forgetting altogether the part we ourselves are playing in their realisation. These seemingly foreign objects we perceive everywhere making up a whole world of apparently outside subsistence. And what we are constantly observing as changing and shifting in this objectified world, are just the things that we feel thus constrained mentally to project.

The fundamental dilemma of philosophy arises just here. Either I give myself up to the objectifying propensity, taking the perceived things naïvely for foreign existences, and racking my brain in order to explain the universe accordingly. Or I am aware that objects and their changes are, after all, pure mental phenomena, and thereupon set about resolutely to construct the solid world out of this somewhat flimsy material.

Viewing the situation from the exteriorising horn of the

¹ Continued from *MIND* XXVI.-VII.

dilemma, we actually find before us a universe of constantly changing things; all more or less rapidly becoming something different from what they were. Yet experience soon teaches that these changes are not wholly arbitrary, that they occur according to some kind of rule. Their course can to a certain extent be predicted; and moreover a broad resemblance obtains between all the products of these changes. It is as if something elemental were undergoing mutations, something that essentially endures within multifarious transformations. The task was therefore to find out this fundamental something, and to explain the variations in its diversified appearances. This was what the Ionian physicists attempted.

But if the transformed objects are real things, and the things of the past give rise to the things of the present, it must be asked: How can a certain thing that is now in existence be in any way the product of some other thing, which must itself have ceased to be, before the new thing could at all have started into being? A thing that is cannot possibly have been produced by a thing that is not. And as it is quite certain that of nothing there can come nothing, it is just as certain that of some *thing* there can come no other thing. We are evidently deluded by our senses. They palm upon us for reality a flux of ever changing and perishing appearances. The veritably real can never cease to be what it was, can never become something else. For ever it must remain what it actually is. It can therefore in no way be known through the senses. Only reason can apprehend it; and reason finds it to be an indivisible, immutable, all-comprising unity.

This, in the main, is the form under which the fundamental dilemma presented itself to philosophers more than two thousand years ago. On the one side the perceptual order, the flow of sensorial awakenings, was taken for the real universe; on the other side the organised potentiality of mind conceptually realised.

All philosophical attempts since may be regarded chiefly as endeavours to harmonise these two extreme views, or to present improved versions of them. The real task thenceforth was either to impart to the immutable substance, recognised by reason, some kind of specialising and moving activity; or to gain a background of substantial stability for the flowing and perishing manifold of sense.

The latter endeavour culminated in the Atomic systems; the former reached its climax in Neo-Platonism. Atomism derived the concrete objects or sensible things as well as the thinking subject, from the concretion or union of unchangeable elements. Platonism, in its most advanced forms, derived the manifold from particularisation within an all-comprising totality. Effi-

ciency was naturally located by Atomists in their only veritable realities ; by Platonists in the one all-involving unity.

Still Democritus himself did not deny that reason was indispensable for the realisation of the atomic universe. For it is obvious that the only real objects, the atoms, are never perceived by the senses. They are only conceived by thought. Therefore the felt qualities of objects cannot possibly be contained in the atoms, which are altogether unfelt existences. And, consequently, sensible qualities must be affections of the feeling subject. This ultimate resting of ancient atomism on the realising faculties of the thinking and feeling individual, left it to the ingenuity of later materialists to explain how a subject entirely made up of insensible and unchangeable atoms can come nevertheless to embody faculties, which are not contained in the sole realities of nature.

To Plato it was very obvious that the combination of ever so many discrete atoms could not be made to account for the unitary world of reason. Yet he himself, unlike his followers of the Neo-Platonic era, shrank from the Eleatic position. He could not bring himself simply to declare the intelligible world the sole reality, and the objects of sense illusive and unreal. He felt that the true problem of philosophy was to explain the relation actually obtaining between the world in mind and the world outside of mind. He made it therefore his special aim to harmonise experience with reason. He found that reason conceives all objects presented by the senses, whilst the senses are incapable of perceiving the unchangeable objects of the intelligible world. He thought it therefore incumbent on us to refer the mutable things to the immutable order, the variable objects perceived by the senses to the invariable ideas conceived by reason. Thus he was brought to assume that the shifting phenomena of sense are only evanescent images of noumenal archetypes. But the images perceived by the senses do not arise spontaneously. They are images awakened in the soul through sensory affections incited by external things correspondingly fashioned. The ideal moulds are found impressed on all things and appearances. The ideas within the soul, through which it is enabled on the one hand to perceive the external things, and on the other hand to refer them to their eternal archetypes, are innate gifts, directly from the shaping power. The Deity has formed the primordial and shapeless matter of the universe into moulds, representing ectypally the eternal ideas ; and has endowed the human soul with the faculty of recognising more and more adequately, through the suggestions of the imperfect and changing material objects, the perfect nature of the divine forms.

Thus, through supernaturally pre-established harmonies, Plato sought to achieve a unifying intercommunication between the external world and the world in mind; and then also between the phenomenal world experienced through sense and the noumenal world recognised by reason. He postulated, for the purpose, on the one side, an efficient moulding power, on the other side, a shapeless matter receptive of form. The original matter he endowed with lawless motor forces, and considered the moulding into form to consist not merely in the shaping into definite figures, but also in the orderly and harmonious directing of the inherent store of undirected forces. In all this we recognise already a multiplicity of causative agents, but to complete the list Plato distinguished further free causation from physically necessitated causation. Physical causes have to be put in operation by something outside themselves. Free causes act spontaneously by dint of intrinsic efficiency. The soul is the seat of free causation. Its force is spontaneous and original. This spontaneity of action is the cause of life, for we attribute life to that which contains in itself the cause of its activity.

In this profoundly intuitive, and yet marvellously circumspect view of nature, posterity found laid out for itself the many puzzles arising in the attempt to bring the external world into accord with the internal world, and to harmonise within the latter the sensible and the intelligible spheres. Theoretical philosophy, up to our time, has mainly consisted in a discussion of the different positions assumed in the Platonic system, showing up their discrepancies and working out their consistencies.

Plato's greatest pupil introduced at once into this harmonising scheme the chief contrast which arises, when through reason we endeavour—not to discern given forms within the turmoil of experience but—to gather up the manifold of the shifting world into steadfast universal notions embracing it all. Aristotle held firm to the belief that reason is the organ of true science; of that science, namely, which not only teaches that things are but also why they are. But—doctrinally at all events—he looked nevertheless upon experience as the only source of all actual knowledge. Platonic ideas were too evidently concepts generalised from particulars, and they were moreover useless in the explanation of nature, for they did not contain the cause of the motion or rest of natural objects. Reason, from the material given by experience, forms inductively general notions, and deduces therefrom less general notions. In the former manner are discovered the principles of science, in the latter scientific knowledge is established.

As the method which Aristotle followed in his search after

the causes of things became predominant in science until supplanted by English Empiricism, it is of great importance to gain a correct insight into it. True knowledge, according to this method, was established by reason detecting the why of the manifold of sense; detecting it, however, not by experimentally determining the concatenation of actual phenomena, but by apprehending their conceptual generalities. Groups of concepts were analysed, till most general marks were reached, such marks as enter into the composition of whole groups of concepts. These then were taken as the *αἰτία* of things, *αἴτιον* signifying thus always "ratio seu causa".¹ Consequently, a phenomenon was not considered understood till its "cause" could be demonstrated through a syllogism, showing that it necessarily followed from some general principle.

As the subject in which all predicates inhere Aristotle pretended to take formed matter. But, in truth, it is form alone which with him constitutes the fundamental reality everywhere. Matter is only potentially the thing which it actually becomes through form. The latter imparts to it reality, force and

¹ In considering this search after first and efficient principles within the ready-made generalities of reason, we are reminded of Kant, who—though fully aware, through Hume's influence, of the fundamental distinction between "ratio" and "causa," between "logischer Grund" and "Realgrund"—went nevertheless straight to work to derive from logical forms the ultimate principles which underlie the system of nature. On a similar logical basis Mr. Herbert Spencer has founded his principle of certitude—the inconceivableness of the negation. But he alone was in possession of a "sufficient reason" for a procedure so strange, especially when made use of by an avowed experimentalist. And, moreover, his rationalistic assumption furnishes him only with a criterion of certitude, not with efficient principles of nature. The final recourse to innate principles of reason in the grounding of knowledge may be thus justified:—The logical order is the expression of the organised generalities of experience. It consists of original synthetical processes of experience, that have become analytical through organic incorporation. It is the essence and orderliness of phenomenal influences permanently fixed in involution and integrated arrangement, by means of organic elaboration and heredity. One may therefore expect to find, amidst such a consolidated fund of naturally accumulated experience, a far more secure and certainly a far more ready foundation for axiomatic truths and first principles than in the fleeting manifold which discloses its relational laws to direct observation only after tedious research. And, no doubt, there is much soundness in this view. Only, we have in defence against consistent rationalism, to remember that the conceptual order has become established chiefly through such relations of the organic individual to outside existences as were developed by urgent subjective needs. The conceptual moulds or grooves are the systematised foundation of the knowledge of human beings evolved under certain very circumscribed conditions. This is especially the case with conceptual moulds or grooves socially established. We in our scientific era are striving through the direct investigation of phenomena to gain a wider and more disinterested knowledge of the universe at large.

directed efficiency. Thus the *composition* and *arrangement* of material bodies has to be looked upon as the veritable cause of efficacy and impressibility in nature. In this sense Aristotle calls the form of life a soul, *i.e.*, a formative principle animating and organising the material of the body. As far as this conception of life goes, we can hardly improve on it. For it is indeed the peculiar composition and arrangement of the bodily material that determines the efficacy and impressibility of life.

The formative soul would, however, not altogether account for the apperceptive activity of the living individual, for the combining and judging operations. Aristotle found himself therefore reluctantly compelled to admit a second soul, or thinking principle. And out of this hyperorganic assumption grew then the puzzle consistently to harmonise the active apperception of the sensorial manifold with its passive reception.

Aristotle recognised also the mere potential import of sensibility, requiring external influences to render it actual. He thought that the senses receive the forms of things without their matter, just as wax takes the impress of a seal-ring without transfer of any of the material of which the ring itself is made.

The brief historical survey I have here entered upon is indispensable to my purpose. I wish to bring distinctly to light the one positive problem on which all philosophical efforts have naturally been employed. In order to understand the development of philosophy it is hardly necessary to transport ourselves beyond the bounds of our organic individuality and its solidarity with the rest of our race. We need not lose our particular existence in anything so exalted as the self-evolution of autonomous thought. The matter becomes plain enough by viewing the historical series of philosophical efforts simply as a succession of abortive and slowly progressing endeavours to penetrate a very definite and clearly given problem of nature. An outside world is perceived and conceived by feeling and reasoning beings. How does this happen? How does the outside world manage to effect its sensorial picturings in the living individual; and how does the perpetual flux of such picturings become an intelligible system of nature to such beings? This is the gist of the discussion that makes theoretical philosophy.

Aristotle's chief divergence from Plato, his view of knowledge as particulars gathered up from experience and generalised into a conceptual order, instead of its being the reference of such particulars to a pre-established system of conceptual types, gave rise to the endless contest between realism and nominalism, between rationalism and empiricism.

Until quite recently, I cannot detect any movement in philosophy containing a germ of sufficient power to be capable of effecting by development the deliverance from the constant and almost fruitless see-sawing of the two schools.

When in the 15th and 16th centuries Scholasticism was at last overthrown, through the Revival of Letters, it became the task of scholars to rethink the Greek philosophies, now gathered from unadulterated sources. The return to nature was only very gradually effected. And, though philosophers liberated themselves eventually more and more completely from the direct influence of Greek tradition, they rediscovered in nature essentially the same problems that had already perplexed the great thinkers of antiquity. The harmonisation of the sensible and the intelligible world, of the universe of extension and the universe of thought, became now, as then, the leading subject of discussion. And, faithful to ancient precedent, reason was still regarded as the true foundation of scientific knowledge. The explanation of nature remained ratiocinative. It started from general premisses found ready-made in mind, and sought to deduce therefrom the particulars and their connexions in the phenomenal sphere. A deeply rooted conviction that thinking and being must be either supernaturally congruous or intrinsically identical guided all philosophical attempts of that period. It was believed that the reason of a thing was also its cause, that logical exposition and physical outcome were identical or at least analogous processes, logical order corresponding faithfully to phenomenal order. Spinoza's words give exact expression to the extreme position of this faith: "*Ordo et connexio idearum idem est ac ordo et connexio rerum*".

The empiricism of Aristotle had been altogether abortive. His inductive precepts were entirely neglected by himself and his followers, in favour of ratiocinative deduction. The principles of knowledge were invariably searched for in mind proper, where they were thought to reside as innate ideas, belonging to it before the admittance of any sensible experience. No serious attempt had yet been made to derive first principles directly from the phenomenal order. But now the time had come when the Aristotelian canon: "*Nihil est in intellectu quod non prius fuerit in sensu*," was to be tried in good earnest. The cultivation of natural science during the 17th century had rendered consciously available an eminently successful method of research. By carefully analysing actual facts of nature, elementary substances and forces were discovered, out of whose combination the analysed phenomena could be reproduced at will. Why should mental facts not be dealt with in a similar manner? Knowledge evidently enters our mind through the senses.

Therefore our ideas, which represent this knowledge, must be compounds of a limited number of sensorial elements. The task is to show how our most complex ideas are thus constituted. Formerly knowledge had been accounted for by means of syllogistic reasoning; now introspective observation was to be applied directly to the perceptual order.

First of all it is clear that, as everything we are aware of is found in consciousness, *i.e.*, mentally existent, known things of whatever description can be composed of nothing but sensorial elements. The outer world, as well as the inner world, are necessarily in their very essence only conscious aggregates and sequences of sense-derived elements of feeling.

The puzzle was now to make such an inwardly and outwardly unsupported world of discrete elements stick properly together. However, we still daily witness this astounding performance on the part of physical science, and are therefore inclined to admit the same possibility with regard to things of the mental order; all the more so because, rightly viewed, the physical things are nothing but mental things. Only the physicist has the advantage of being allowed to endow his sensorially unrealisable elements with whatever powers he may deem fit, whilst actual sensorial elements are much more directly under verifiable control. The most awkward hindrance to the construction of a coherent universe of feelings is the evident evanescence of each sensorial element. Physical atoms are considered everlasting and indestructible. Sensorial atoms arise from nothingness, and lapse at once back into it. For this obvious reason the sensorial composition of nature could not be in any degree plausibly effected without manifold postulations. A number of instantaneous and separate feelings, which could possess no endurance and coherence in themselves, were quite unfit to produce anything like the phenomenal world we are actually conscious of. A minimum of lasting and combining structure had at all events to be hypostatised. Memory was therefore acknowledged to preserve and to reproduce copies of the sensorial originals; and customary association was established as a power coercing the sensorial particulars into regulated coherence.

But the part this view of things has really played in the development of philosophical insight lies principally in its disclosing the difference between the relation of ideas to each other and the connexions of matter-of-fact occurrences. It rendered clear the fact that analytical or deductive reasoning only unfolds what had been previously put together; that therefore only synthetical propositions can be instructive. From this it necessarily follows that all our knowledge must be experientially derived. Its separate facts must be somehow connected by

bonds established through experience; and causation, or the necessary connexion of the separate facts, can be nothing but such an experiential link, rendered inseparable through undeviating reiteration of experienced sequence.

This momentous distinction between analytical and synthetical propositions, between logical foundation and foundation in reality, came, through Hume's influence, to be realised by a philosopher who had been trained in the rationalistic school. It was Kant who, in this way, also became convinced that no process of formal logic can possibly lead us to conclusions beyond that which is already contained in our premisses; and that therefore the necessary connexion of one occurrence with an entirely different occurrence must be of experiential origin. "I understand," he says, in one of the writings of his earlier period, "quite well how an inference is grounded in its reason in accordance with the principle of identity; for the inference is really identical with a part of its reason. But how something can flow from something different, not in conformity with the principle of identity, this is a problem which I should like to be made clear to me." How something may be a cause, or may possess power, can never be "understood by reason. These relations must be entirely taken from nature."

So deeply tinged with Empiricism was Kant at that period. In the year 1765, however, Raspe published the *Nouveaux Essais* of Leibniz, which reawakened rationalistic tendencies in him. The gist of the argument against Locke became the real motto of the Critical philosophy: "*Nihil est in intellectu quod non prius fuerit in sensu nisi ipse intellectus*". To Kant the last clause seemed an incontrovertible truth. It had to be adequately demonstrated. He reasoned thus: Synthetical propositions, when merely experiential, cannot possess universal validity. But the synthetical propositions of mathematics, for instance, do actually possess universal validity. And mathematical constructions are, moreover, put together *a priori* by an activity of the mind altogether independent of sense-experience. Therefore the mind is in possession of a synthetising power *a priori*, and it must be this power exerted on sense-material which constructs universally valid experience or real knowledge.

Here we are only interested in Kant's view of Causation. We wish to see how he explained the necessary connexion of sensible phenomena. By examining logical forms he derived, as he believed, a complete set of synthetical functions *a priori*. That of all these so-called categories, causation is the only legitimate one, has been speciously maintained by Schopenhauer. At all events, causation is among the best of them. Kant establishes it as a function *a priori*, by which the intellect is enabled to

cement together for good experientially connected appearances, so that these connexions shall henceforth be universally valid.

The utter untenability of such a view I have shown at length.¹ And not agreeing with those who derive mathematical experience from the usual sense-impressions, I have also shown that the special validity of synthetical propositions in mathematics is to be found in our individual possession of a system of non-mental causative agencies, by which we are enabled at will and designedly to compel and to construct without the aid of external stimulation the mathematical *percepts*, of which the propositions in question are assertions.

The organic foundation of the Uniformity of Nature, and therefore of the universal validity of synthetical propositions expressive of the same—the validity, namely, for all places and all times—rests on the adequacy of the mental effects as a system of signs; and this again on the strict reconstitution to full integrity of the experiencing individual. Within the identical potentiality of an identical being there must follow identical effects from identical causes. Therefore, whenever anywhere in the future the same mental effect takes place, it must be the same cause that produces it. And this same cause—to make complete its identification as a definite complex of powers—must naturally be accompanied by all the mind-arousing potentialities that were formerly connected with it. The weight and the colour now experienced convince me that it is gold I have before me. This really means that certain other mind-arousing potentialities, accompanying this specific weight and colour, will now also be found connected with the foreign cause of these my present sensations. If, however, I find that the thing before me fuses and dissolves, for instance, under different conditions from those on account of which I formerly gave it the name of gold, I then pronounce the differently reacting foreign existence to be something not the same as gold, to be a thing different from the one which aroused the gold-qualities. In fact, it is this ascertaining of the potential effects of causative agents which yields to us all our scientific identifications and distinctions among the multifarious foreign existences that make up the sense-compelling universe of externalities.

The universally valid proposition, upon which our knowledge is founded, amounts to this: Whenever identical mental effects actually appear, or are expected to appear, their causes must be

¹ See *Die Kant'sche Erkenntnisslehre widerlegt vom Standpunkt der Empirie* (München, 1871), especially pp. 141—176; “Die nothwendige Verknüpfung des sinnlich Mannichfaltigen ist ein physiologischer und kein logischer Akt.”

identical; and whenever the mental effects differ, their causes must also differ.

The great source of fallacy in this mental recognition of causes lies in the propensity of intrinsic stimulation to give rise, of itself, to appearances similar or identical with those of extrinsic stimulation. We are, however, secured to a wonderful extent against this possible source of fallacy, by our entire frame having become organised into a system of relational apparatuses, whose doubleness and further mutual corroborations are concerted in a manner to render all but quite certain the validity of objective recognition.

And just as universal validity for a certain subject depends on the enduring identity of such a subject, so does validity for many subjects or for all subjects of one and the same race, depend on abilities possessed alike by all individuals. It does not depend on the inherence of all separate minds in one and the same super-individual mind or consciousness.

But we have now to return to our historical survey. Philosophy after twenty-four centuries of most diversified trials had failed to discover the ways of knowledge. In no manner could it be adequately extracted from reason, and just as little could it be fully derived from the senses. Nor had any compromise at all succeeded. Nativism and Empiricism remained fundamentally irreconcilable.

Suddenly, however, light began to pierce the hitherto immovable darkness. It was Mr. Herbert Spencer who caught one of those rare revealing glimpses that initiate a new epoch in the history of thought. He saw that the Evolution-hypothesis "furnishes a solution of the controversy between the disciples of Locke and Kant". To us younger thinkers, into whose serious meditations Darwinism entered from the beginning as a potent solvent of many an ancient mystery, this reconciliation of Transcendentalism and Experientialism may have consistently presented itself as an evident corollary from the laws of heredity. But what an achievement for a solitary thinker, aided by no other light than the penetration of his own genius, before Darwinism was current, to discover this deeply hidden secret of nature, which with one stroke disclosed the true relation of innate and acquired faculties, an enigma over which so many generations of philosophers had pondered in vain!

To an attentive student of nature and its philosophical conception *Organisation* appeared now as the one central fact everywhere offering itself as the veritable substantial basis, as the cause *in potentia* and *in actu* of natural occurrences. Organisation could be readily discerned as the obvious implication of Hume's results, and therewithal as the deliverance from their

nihilistic bearings. Organisation again was clearly the very matrix of the system of synthetising powers so strenuously and vainly sought for by Kant in mind proper. And Organisation was certainly the evolutionally accumulated embodiment of all potentialities of life.

The understanding of Organisation became therefore the *conditio sine qua non* of philosophical progress. Unfortunately the accepted theory of organic individuality barred the way to any intelligible and consistent harmonisation of life and mind. Mr. Herbert Spencer, who had discovered in the organic cumulation of generic experience the real secret of the *a priori* propensities of the living individual, was—for want of a true science of vitality—powerless to explain the facts of mind in correspondence with the facts of life, nay even to explain the facts of the simplest organisation from his own evolutionary standpoint. All his constructive ingenuity and philosophical subtlety and depth could not overcome the downright impossibility of conceivably putting together, through aggregation or association of elementary forms and powers, the bodily and mental structure of an organic individual.

Synthesis of ultimate units of structure and feeling, synthetical unity of organisation and apperception, personal identity of body and mind,—all these cardinal facts of nature remained as unintelligible to his synthetic philosophy, as they had proved to the analytic philosophies of his experiential and transcendental predecessors.

The task was to suppress as far as possible all preconceptions, and to enter seriously on a renewed investigation of life and organisation. If mind exists indeed in strict correlation with life, then an insight into organic interdependence and vital processes must also yield an insight into the secrets of mentality. In former contributions to this Journal and elsewhere I have given an account of the principal results of a long series of laborious researches undertaken in this spirit. I have chiefly shown how through relational influences and adaptation to the same, more and more specialised organic differentiations are gradually wrought into the unitary substance of the indivisible organic individual; how the synthesis of the elementary feelings aroused at the sensory surface can only be realised through the specific energies of central structures; and how personal identity is actually maintained by means of an adequate reconstitutive integration of the organism as a whole.

Whoever will give careful consideration to these results will find that they are the expression of a faithful adherence to the teachings of nature, that they consistently flow from actual observations, and are by no means due to an inordinate striving

after unity of conception of such facts as stand unharmonised in the order of nature, as represented by us.

Synthesis (MIND, XVII.), Unity (Nos. XIX., XX.), Identity (No. XXIII.), these chief stumbling-blocks of all philosophies, have—through a more thorough investigation of vitality—received their scientific explanation. Flimsy fumes of fancy have been thus dispelled, and a view opened into true depths of mystery beyond. In comparing the actual demonstration of these great subjects given by the philosophy of Organisation, with the verbal accounts rendered of them by the different idealistic and realistic systems, I believe unbiassed thinkers will concede that on the one side we have substantial existents and veritable occurrences, on the other side fictitious entities and nominal processes.

The difference between the method adopted by Locke's consistent followers and the method here employed is to be found in the interpretation of mental states, not as originating each other and linking themselves together by force of their own nature, but as adequately caused in their presence, composition and changes by non-mental powers. Consequently the analysis of "complex ideas" or rather of the mental presence is not performed by its decomposition into constituent sensorial elements, meaning nothing beyond themselves; but by referring the definite complex of presented and represented feelings to objective causes, the existence of which they have been found experimentally to signify. Thus experience does not consist in the order of the mental elements as such, but in their order as denoting specific concatenations of the causative agents. Experience is the realisation of definite complexes of correspondences between mental states and their non-mental causes; never forgetting, in the process of complete scientific explanation, that the definite complex of such correspondences, which we call our own organism, is at all times playing the incomparably greatest part in this causative performance.

In physical science the mental states of the observer are employed in order to establish the characteristics of the thing under investigation. In mental science the sense-arousing powers of outside things are made use of for the purpose of ascertaining the characteristics of the mental states themselves. In examining a brain for instance, the perceptual details awakened by the foreign presence are applied to the interpretation of that foreign presence. But if, on the other hand, it is desired to gain a knowledge of the influences of the foreign presence, called a brain, in the production of mental states, then experiments with that foreign presence serve to elucidate the constitution of the mental states influenced by it. A string

emits a certain sound. We wish to ascertain the conditions of the foreign powers giving rise to the phenomenon. We use our sensibilities for the purpose, and find out that just so many vibrations of the string imparted to the air will produce exactly this sound. If, on the contrary, we are desirous to know how the sound as a sensation is produced, we experiment with the foreign powers till we are certain that just so many aerial beats are imparted to our tympanum; and then we experiment further with the organ of hearing till we discover the exact part which each definite portion of it is playing in the process. Thereupon we continue our search till we come to the very structure in the brain, a certain specific action of which is invariably accompanied by the sound in question.

In this case we have also utilised the observer's sensibilities, but it was in order to make out the exact complex of non-mental powers which effect a certain mental state. It was not our aim to investigate the constitution of the non-mental powers themselves. Of course, as all non-mental powers are only known by their mental effects and are adequately represented by the same, the knowledge of all the conditions giving rise to a mental state must also constitute the full knowledge of the non-mental powers influencing it. But in the case of practical and physical knowledge we oppose our entire organic individuality as reacting medium to the world beyond our skin. The final perceptual effects of our stimulated surface-sensibility we take to signify directly the nature of the stimulating powers, whilst in truth the influences of our entire organisation intervene, giving to the mental effects their whole wealth of contents, and receiving only specifically awakening touches from the outside.

This evident consideration shows how very inferential a discipline physical science actually is; how utterly dependent on the realising powers of the organised individual. Indeed the truth and therewith the availableness of our knowledge of the external world rests completely on pre-established harmony, evolutionally organised.

The difference between Kant's procedure and that of the philosophy of Organisation is simply this. The *a priori* structure which must be somehow potentially subsisting, and which evidently imparts systematic significance to our incoherently received sense-affections, was placed by the Critical philosophy in the faculties and activities of mind proper. The philosophy of Organisation, on the contrary, proves that it rests in the faculties and activities of our vital organisation; recognising at the same time that this vital organisation is only symbolically known by its mind-arousing influences on us as observers.

We have now, in conclusion, briefly to recapitulate the chief complications of Causation shadowed forth in these pages.

Taking the mental presence as the central and final outcome of the interaction of certain non-mental powers, it is obvious that these non-mental causative agents present themselves to an observer as an environment of manifold and complex things affecting in various ways the surface of a unitary organism.

The seemingly plainest and most obtrusive problem of interaction is the so-called physical problem, the explanation of the constitution and effectiveness of the things of the environment. But as the things and their changes are realised only by us as observing agents, they can be known solely by means of their influences upon our sensorial capacities. Consequently the ultimate foundation of physical science will have to be established through an adequate theory of knowledge.

Hume and his consistent followers aimed at ignoring completely the realm of affecting externalities. They began their philosophical operations with the sensorial appearances as such. These they pretended to take for the ultimate reals, signifying nothing beyond themselves; and then sought to constitute laws of nature by introspectively ascertaining the direct concatenation of such sensorial phenomena.

Kant recognised emphatically the influence of a world of externalities on our sensorial receptivity. The immediate perceptual effect of this interaction between ourselves and the outer world he called an "appearance". He abstained, however, from investigating the mode of production of these appearances, and left thus completely in the dark the way by which external influences can come at all to affect mind. This most fundamental kind of natural causation, the interaction between the outer world and the sensorial capacities of the living organism, he excluded altogether from his account of causation in general. He declared the appearances to be simply "given," and then endeavoured to demonstrate the transformations wrought by intellectual activities on the passive raw-material of sensorial experience.

Kant's idealistic followers, finding that the so-called appearances or phenomena are altogether mentally fashioned, denied the right of assuming sense-affecting powers behind the phenomena. They either operated directly with the phenomena themselves, just as Hume's followers, only submitting them to the elaborating activity of autonomous thought, instead of allowing them to coalesce experientially, by dint of inherent capacities of their own. Or they looked upon the constructive productivity of thought as the very source of the whole phenomenal order.

With us here the sensorial appearances or phenomena are

perceptual realisations of the actual and potential influences of external powers on our organisation. It was shown that phenomena emphatically designate foreign noumenal existences; existences not only outside our mind, but outside the specific noumenal existence which we call our own organism. Our own organism, as well as the other externalities, are capable of becoming phenomena, definitely realised within the sensibility of an observer. By dint of specific perceptual manifestations, persistently compelled in the observer, he feels constrained to assume a system of adequate causes, exactly corresponding to these perceptual manifestations. To us all the noumenal existence of the organism and its environments, though altogether mentally, *i.e.*, phenomenally, revealed in the manner stated, forms, nevertheless, a most steadfast natural belief.

Knowing the foreign noumenal causes merely through their perceptual effects, and these effects being only revealed through the mediumship of our own individual organisation, it follows that we can judge of changes wrought by one foreign existence upon another solely through influences from both foreign existences affecting our sensorial surface, and becoming perceptually manifest by means of the specific energies of our individual organisation. It now comes to pass that within this our organisation all activities are systematically connected and unified. The interaction of two foreign existences can be therefore perceptually represented only as an inherent phenomenal change within a single mental presence. In consequence, this representative realisation within the prearranged potentiality of a coherent and unifying medium leaves entirely unknown how it happens that foreign powers, appearing to us as separate things, can come to exert at all any influence upon each other. As all changes become manifest in one and the same unitary and realising medium, the interaction of separate existents remains the most incomprehensible *event* in nature, existence itself being its most incomprehensible *fact*.

Assuming, however, from distinct perceptual indications the existence, separateness and interaction of externalities, we are enabled to construct a science of the same, not indeed by noticing the laws of the association of the phenomena as mentally reproduced, but by recognising that we are offering to the outside powers a medium of subtle sensitiveness, wherein—with practically invariable success—they can impress in specific effects their sundry specific peculiarities. Such a faithfully recording and realising medium is afforded in the enduring and identical substance which composes our living individuality.

If the influence of an outside power could set going within the realising individual a train of mental changes, of which

each preceding change were the efficient cause of each succeeding change, then we should consistently arrive at Fichte's first impulse, upon which all the rest would be mere intrinsic production. Physical science there could be none. The possibility of such a science of externalities rests, on the part of the observer, entirely on the identical reconstitution of his individual sensibilities. He offers an ever identically renovated impressibility to the outside powers, and is thus enabled to study the specific differences and agreements of their respective influences. Out of such carefully discriminated and generalised sensorial material he constructs his physical science. But if, on the other hand it were to happen, that the observer's own sensibility remained identical, whilst no kind of order or stability were maintained by the influencing powers, then again physical science would be an utter impossibility. Indeed the fact of the perceptual, *i.e.*, ideal, preformation of the definite potentialities of external influences, together with the disclosures of organic evolution, renders it certain that, through connatural development and adaptation there has been established an extensive and accurately prearranged correspondence between the potentialities of the living organism and the potentialities of the outside world. The entire organism is so clearly the expression of such an adaptive development, that we need not wonder to find the correspondence also faithfully expressed within the mental sphere.

Veritable scientific causation is therefore something very different from the efficient production of changes among external things; different also from invariable sequence; or from subsumption under an *a priori* category; or from the evolutionary procession of any given totality of existence; or from spontaneous mental efficiency of whatever kind.

Viewed even as merely perceptual, causation is already founded on substantiality of the realising individual, as well as on substantiality of the influencing powers. And it is moreover founded on an evolutionally pre-established harmony between the realising individual and the foreign existences affecting the same.

In turning our attention from the physical order as such to the perceptual representations themselves, we endeavour scientifically to analyse the latter through the assistance of appropriate experiments. We seek to ascertain the direct sensorial effects of specific stimulations, and therefrom to infer what in the resulting percept becomes added either through irradiation of direct stimulation or through spontaneous intrinsic activities. We have to confess that, in this undefined borderland of externally compelled feelings and intrinsically awakened ideas,

experimentation gets to be extremely difficult. Notwithstanding, the various stages in the synthesis of separate sensorial stimulations are beginning to be recognised, and the ideal substitution of the perceptual complement of direct sensorial effects is opening a view into the thorough solidarity of the feeling, perceiving and conceiving subject. The final aim of this science can be no other than organically to explain the entire mental presence and its changes. By consistently pursuing the experimental method we may hope more and more definitely to succeed in this difficult undertaking.

Introspectively, we discern principally three different orders of mental phenomena, everywhere interpenetrating each other; the physical order, extrinsically compelled; the ideal order, associatively arising; the logical order, intrinsically preordained. All these orders are potentially preorganised in the realising subject. They have their foundation and matrix in that, which an observer perceives as certain definite organic structures and activities. Extra-organic stimulation incites chiefly the physical order; intra-organic stimulation the associative order; whilst the logical order is the expression of the assimilation of all kinds of potentialities into the systematic totality of the realising individual. Any physical or ideal subject which we logically postulate, is detached from our individual totality, is by various determining means specifically actualised within the potential all-comprehension of the one ultimate and identical subject, to which all logical postulations and assertions are in verity referable. The passage from the physical order into the logical order can be introspectively traced in the transformation of synthetical into analytical propositions. Organically, it must be accomplished by the assimilation of physically compelled changes into the reconstitutive personal current, by which they are then spontaneously and identically reproduced.

Introspectively, the gulf between conscious states and their non-mental causes is insuperable. Everyone feels that to speak of unconscious mental states is not only to be uttering a paradox, but to be giving expression to a *contradictio in adjecto* almost as preposterous as if we were to assert non-existent existence. Yet we recognise, nevertheless, that something influences at times unconsciously our mental states, which at other times is distinctly discerned as entering into the actual mental presence. This evident occurrence seems to teach us that, after all, there can be no such radical distinction between mental actuality, which alone is conscious, and certain activities of the potential matrix, which under certain conditions remain unconscious. As the potential matrix has power to awaken its perception in an observer, it is from this objective and distant

standpoint that its unconscious activities, forming unfelt links within the changes of the mental presence, have to be studied and conjectured.

Nerve-tissue is the consummation and cumulative outcome of the cycle of activities which constitutes vitality. It forms an organically fixed and maintained system of relations to outside influences. The functional potentialities of this organic embodiment of possible interactions with external powers consist in the capacity of adequately responding or reacting, by dint of inherent specific energies, to the most varied and specific influences of those outside influences. The functional responses or specific reactions, when actually and adequately occurring, form the inward experience of the organic individual, or its mental presence. The mental presence is mental potentiality in functional action. The mental *potentiality* has power to compel in an observer the definite percept, which we call nerve-tissue. The mental *actuality*, if rendered perceptible, would appear as functional movement within this, the observer's, percept, *i.e.*, within what we call nerve-tissue.

This, I think, is the general and legitimate interpretation of our mental presence, when we survey the entire range of compelling powers of which it is the effect or outcome.

EDMUND MONTGOMERY.

IV.—INCOHERENCE OF EMPIRICAL PHILOSOPHY.

I USE the term Empirical Philosophy to denote a theory which is not primarily a theory of Being, but a theory of knowledge; nor, again, a merely psychological theory, considering the psychological fact called knowledge merely as a phenomenon of particular minds; but a doctrine that is concerned with knowledge in respect of its validity, laying down the general criteria by which true or real knowledge may be distinguished from what is merely apparent: what—using a convenient, though hardly current, term—I will distinguish as an *epistemological* doctrine. Admitting that any complete system of philosophy must include some reasoned answer—positive, negative, sceptical or critical—to ontological questions; I still think that the term Philosophy may be fairly applied to what is primarily a doctrine of the criteria of knowledge, without reference to any ontological conclusions which such a doctrine may be held to establish. And if we try to give a precise and distinctive meaning to the term “empirical” or “experiential,” as applied to existing schools of philosophy, without materially restricting its ordinary use, we must, I think, make it signify merely the *epistemological* doctrine that all cognitions that can be philosophically accepted as valid, whether universal or particular, must be based upon experience. In this sense we may say that Empiricism of some kind is the philosophy which students of Natural Science, at the present day, generally have, or tend to have; and also other persons who cannot be called students of Natural Science, but whose minds are impressed and dominated by the triumphant march of modern physical investigation. Such persons have a general, unanalysed conviction, independent of close reasoning of any kind, that the recent conquests of the human intellect over the world of concrete fact are mainly due to that precise, patient and elaborate questioning of experience which has certainly been an indispensable condition of their attainment; that the extension and steady growth of these conquests constitute at the present time the most important fact for one who wishes to philosophise; and that any philosophy that is not thoroughly competent to deal with this fact has thereby a presumption against it that it is behind its age. And in order that my point of view in the remarks that follow may be understood, I should like to say at the outset that I fully admit the force of this general presumption in favour of Empiricism. Just as at the outset of modern philosophy in the age of Descartes (as well as earlier still, in the age of Plato), Mathematics naturally presented itself as the type

of solid and definite knowledge, so, it seems to me, the type is now furnished by the sciences that rest on experience; to which mathematics—in the natural *primâ facie* view—stands in the subordinate relation of an instrument.

I am therefore as much disposed as any one can be to go to experience for a test of truth; but I find myself unable—with all the aid of the eminent thinkers who have recently maintained some form or other of Empiricism—to work out a coherent theory of the criteria of knowledge on an Empirical basis. The difficulties in the way of this attempt appear to me to be of a very fundamental character; and one important group of them—those which relate rather to the premisses of empirical philosophy than to the rational procedure by which its conclusion is reached—do not seem to me to have received sufficient notice from the leading empirical writers. It is, therefore, to this part of the argument that I chiefly wish to direct attention in the present paper.

Before, however, I proceed to state these difficulties, it will be well to define somewhat more closely the fundamental doctrine of Empiricism. I understand this to be that all trustworthy cognitions¹ are either immediate cognitions of particular, approximately contemporaneous, facts, or capable of being rationally inferred from these;—let us say, for brevity, either ‘immediately empirical’ or ‘mediately empirical’. It is only in this sense that the statement that all valid judgments are founded on experience appears to me to have a definite epistemological import, *primâ facie* tenable.

To make this clearer, I will consider briefly certain other senses in which knowledge is currently said to be “founded on” or “derived from” experience. In the first place, by predicating this of any piece of what presents itself as knowledge, it may be merely meant that such apparent knowledge is *caused* by certain antecedent empirical cognitions, from which, however, it is *not* rationally inferrible; or rather, strictly speaking, that it has *among* its causes such antecedent cognitions—for no one would give a mere statement of these antecedents as a complete account of its causation. The vulgar induction of a universal rule from a few particular cases is an instance of this kind of derivation of a belief from experience. It is evident that the ascertainment of the empirical antecedents of such a universal judgment, however interesting psychologically, does not in itself help us to decide the question of its truth or falsehood: for (1) *ex hypothesi*

¹ I ought perhaps to state that in this paper I use the term cognition to include intellectual states or acts which are, or involve, false judgments, as well as those which are, or involve, true judgments—or, to express it otherwise, *apparent* as well as *real* cognitions.

it does not supply adequate grounds for regarding the cognition so caused as philosophically established, and (2) it is no less manifest that it does not disprove the belief so arrived at—since obviously a generalisation from a few cases may be true, though it cannot be proved by reference to these cases alone. The epistemological question we have to ask about it is not from what sources it was originally derived, but upon what grounds it is now deliberately held.

The result is similar if the ascertained psychical antecedents from which any judgment is said to be “derived” are not cognitions at all but merely feelings—sensations or emotions. The ascertainment of the invariable antecedence of any such psychical facts obviously cannot validate any cognition thus ascertained to be their consequent (unless it be the cognition of these facts themselves). And it seems to me equally evident that it cannot invalidate it;—it is only by a palpable confusion between “antecedents” and “elements,” or by a quite unwarranted transfer of chemical inferences to psychical facts, that certain Associational psychologists claim to have “analysed into elementary feelings” apparent cognitions of what is not feeling, when they have merely shown these feelings to be invariable antecedents or concomitants of the cognitions in question. Any cognition, as introspectively contemplated, is essentially different from any mere aggregation of feelings: and I am aware of no tenable grounds for concluding that such cognition “really consists” of elements which careful introspection does not enable us to discern in it.

Still more is the ascertainment of the (so-called) “derivation from experience” of any piece of apparent knowledge *epistemologically* irrelevant, if the antecedents loosely referred to as ‘experience’ are neither cognitions nor feelings, but relations of the *bodies* of the cognising individuals (or their ancestors) to other material things: as for instance if by saying that a child can be shown to have had “experience of space,” before it can judge that a straight line is the shortest line between its extremities, it is merely meant that its limbs must have been moved about, or other matter moved across portions of its body, &c. For no empirical science professes to explain the relation between the validity or invalidity of judgments and the antecedent motions of the organism of the judging individual: so that the mere knowledge of the antecedent motions in any such case, however complete, would not give us any presumption as to the truth or falsehood of the consequent cognition. All that the most confidently dogmatic of modern biologists claim is that the cognitions of any organism capable of cognition—or rather the organic movements accompanying them—will have a certain tendency to produce motions preservative of the organism under the

external conditions that normally follow those that caused the cognitions in question: and it is obvious that a cognition may have this tendency without being true.

Finally, it should be observed that the phrase "empirical theory of the origin of knowledge" is often used to denote a doctrine which, like Locke's, is merely empirical (in a sense) as regards the *ideas* by comparing which knowledge is held to be constructed; but is essentially "intuitional" or "*a priori*" as regards the actual synthesis of ideas that constitutes knowledge. However strongly Locke holds that ideas "come from experience"—*i.e.*, from presentation to the mind of the realities which the ideas represent; he none the less holds that universal and immutable relations among these ideas admit of being intuitively known by abstract reflection, and that it is the apprehension of such relations that constitutes knowledge, in the highest sense of the term. And, clearly, it is the latter doctrine and not the former that must determine his *epistemological* position.

I may be allowed, however, to observe that even as regards the materials of knowledge, it does not appear to me that the ascertainment of the first origin of ideas can have any decisive effect; on account of the great changes which ideas gradually undergo, in the course of their use as instruments of scientific reasoning. We may find instances of such change in the nomenclature and terminology of almost any science. To begin with mathematics: I do not deny that my original ideas of "straight line," "circle," "square" were derived from experience; in the sense that they were caused by my seeing and moving among material things that appeared straight, round, and square. But the proposition seems to me one of merely antiquarian interest; since all competent persons are agreed that, in the degree of refinement in which these notions are now used in mathematical reasonings, it is impossible to produce any objects of experience which perfectly exemplify them. In physical sciences, however, this change of meaning is often more marked. Take the notion "Force". This seems indubitably derived from experience of muscular exercise, and hence its original significance must have included, at least, some vague representation of the movements of muscles, or of the limbs moved by muscles, and also some of the specific feeling of muscular effort. But by "Force," as used in physical reasonings, we mean merely a cause which we conceive obscurely through its relation to its effect, motion; which motion, again, may be merely possible, not actual. Hence, whatever be the conditions within which our knowledge of forces is confined, it does not appear that the origin or original content of the notion can have much to do with these conditions. Simi-

larly in chemistry, the ideas of "acid" and "salt" must have originally represented merely the flavours experienced by tasting the things so called: but now we regard such flavours as mere accidents of the relation of the things we call "acids" and "salts" to our palate, and not even universally inseparable accidents. In psychology, again, the difference between the original character of the ideas by means of which we think about mental processes, and the character they ultimately acquire when our reasoning has become scientifically precise, is still more striking. For almost all our terms originally represented physical, not psychical, facts; and the physical significance often clings to the idea in such a way as to confuse our psychological reasonings, unless we take pains to get rid of it; while, at the same time, thinkers of all schools would agree that we *have* to get rid of it. Thus, "impression" meant the physical fact of stamping or pressing, "apprehension" meant "grasping with the hand," "intention" and "emotion" suggested physical "straining" and "stirring up". But we all put these physical meanings out of our view, when we are trying to think clearly and precisely about psychical phenomena; however interesting it may be to note them when we are studying the history of thought. Hence, I conclude that the settlement of the time-honoured question of the "origin of our ideas"—so far as it admits of being settled by received scientific methods—will not really determine anything of fundamental importance, either as regards the *materials* of our actual knowledge, or as regards the mode of constructing knowledge out of them.

After this preliminary clearing of the ground, I pass to consider how the cardinal doctrine of Empiricism as above defined—that all trustworthy cognitions are either mediately or immediately empirical—is philosophically established. We may begin by laying down that this general criterion of truth must itself be based on experience—*i.e.*, upon particular cognitions of the truth of this, that and the other empirical cognition: since it would be palpably inconsistent for Empirical Philosophy to start with the general assumption, *not* based on experience, that no general propositions are trustworthy, *except* those based on experience. If, again, we ask how these particular cognitions are to be obtained, it is obvious that they must either be proved or assumed; and that if we say that they are proved, this proof can only be given by assuming similar particulars, since it would be inconsistent with the criterion to be established if we allowed any part of its proof to rest on universal propositions as an ultimate basis; so that ultimately we must be led back to particular cognitions assumed without proof.

What, then, are these particular knowledges of which Em-

irical Philosophy must assume the validity at the outset of its procedure? Popular Empiricism seems to me to give at different times two different answers to this question; and by shifting about from the one to the other, and sometimes mixing the two, its argument, I think, gains in plausibility what it loses in clearness.

(1) Sometimes the answer is—whether explicitly or, as is more often the case, implicitly—that we start with what is generally admitted to be solid knowledge; that is, not the disputed and controverted matter which is found to some extent in all departments of study, and of which Metaphysics and Theology entirely consist; but the undoubted facts of history, natural and civil, and the generalisations of positive science of which, as they are commonly supposed to be based upon experience, the examination leads us *primâ facie* to the empirical criterion. Let us grant for the present that being founded on experience alone is a characteristic which we find, on examination, to belong to the majority of beliefs that are commonly admitted as constituting solid knowledge. It must still be clear that, if we make a complete survey of the classes of beliefs that are supported by the common sense of mankind, we come upon important aggregates of beliefs which, in the absolute universality with which they are commonly accepted, are certainly not based upon experience. I do not now dispute the empirical arguments used to prove that these beliefs, when duly restricted, have really a solid empirical basis—as, for instance, if we believe not (as common sense holds) that a straight line is always the shortest line between its extremities, but merely that it is so in the space with which we are familiar. But such modifications of current beliefs implicitly accuse common sense of error too extensive to leave its guarantee philosophically trustworthy: so that it becomes impossible in strict philosophical reasoning for an Empiricist to start with assuming the validity of what is commonly taken as knowledge. We may allow him to accept for practical purposes whatever is believed by “every sensible man” or “every one with the least knowledge of physical science;” but he must not introduce in philosophising propositions guaranteed by this kind of warrant alone.

This seems so plain, that I need not enter into further difficulties involved in the acceptance of the criterion of General Consent,—as that the consent of the majority to science and history is ignorantly given, or not really given at all; that the consent of one age and country differs from that of another, and that in past ages the criterion would have certified many doctrines that we now reject as erroneous and superstitious, &c.—especially since these considerations have been forcibly urged by more than one empirical philosopher. In fact, empirical

philosophers do not, for the most part, appeal expressly to the criterion of General Consent, so far as their philosophical procedure is concerned. If formally asked what the cognitions are which they assume to be true in the reasoning by which they establish the empirical criterion, they would usually answer (2) that they assume, first, what is immediately known, or what we are immediately conscious of, and, secondly, whatever may be cogently inferred from this.

The second part of this answer has been frequently attacked; and it certainly appears to me that no perfectly cogent inference is possible on strictly empirical principles; because no cogent inference is possible without assuming some general truth, the validity of which cannot itself be guaranteed by any canon of cogent inference. But the assumption of the validity of immediate cognitions seems to me equally open to attack; and it is to this that I now wish specially to direct attention. I must begin by removing an ambiguity in the term "immediate". When an Empiricist speaks of a cognition as "immediate" he must not be understood to mean that it has not among its causes some antecedent psychical or physical phenomena—some feelings, or some movements of the matter of the organism of the cognising individual; for no empiricists maintain that *any* cognitions or any other mental phenomena are *uncaused*; and if they are caused at all, they must stand in the relation of effect either to psychical or physical phenomena, or to both combined. The "mediation" that is excluded by terming any cognition "immediate" must therefore be logical mediation or inference.

If then it be asked, why should we make the general assumption that error is absent from non-inferred cognitions and from these alone, the answer would seem to be, first, that immediate knowledge carries with it its own warrant; that when we immediately know we also, by a secondary inseparable act of the mind,—generally latent but becoming explicit if any doubt is raised,—know that we know certainly: and, secondly, that we have no experience of error in non-inferred cognitions; error being always found to come in through inference.

But it is practically of no avail to say that immediate cognition is infallible, unless we have a no less infallible criterion for ascertaining what cognitions are immediate: and the difficulties of ascertaining this are profound and complicated. Are we to accept each man's own view of what he immediately knows? This certainly seems in accordance with empirical principles, as all experience must be primarily the experience of individual minds. But if we take, unsifted and uncriticised, what any human being is satisfied that he or she immediately knows, we open the door to all sorts of mal-observation in material mat-

ters, and to all sorts of superstition in spiritual matters,—as superstitious beliefs commonly rest, in a great measure, upon what certain persons believe themselves to have seen, heard, or otherwise personally experienced. And in fact, no empiricist adopts this alternative; there is no point upon which empirical philosophers are more agreed than on the incapacity of ordinary persons to distinguish their immediate from their mediate knowledge. Shall we, then, say that we take each man's experience so far as it commends itself to other men? But if we mean "other men generally," this is only our old criterion of General Consent, in a negative instead of a positive aspect, and the acceptance of it would therefore bring us round again to the difficulties already discussed; with this further difficulty, that it is hard to see why, on empirical principles, any one man's experience stands in need of being confirmed by that of others. I do not see what right an empiricist has to assume that one man's immediate cognitions *ought* to coincide with the immediate cognitions of others; still less, that they ought to coincide with their inferences. And if empiricists do not trust common men's judgment as to their own immediate knowledge, they can hardly put them forward as trustworthy judges of the immediate knowledge of others.

It may, however, be said that to distinguish accurately immediate from mediate cognitions requires a skill beyond that of ordinary men, only attainable by training and practice: that, in short, it requires the intervention of psychological experts. This seems to be the doctrine of James and John Mill, and, in the main, of the school of which they, with Mr. Bain, are the founders; but, in my opinion, it is open to several fatal objections. In the first place I do not see how even an expert can claim to know another man's immediate knowledge without assuming that all human minds are similarly constituted, in respect of immediate cognition; and I do not see how this assumption is legitimate on empirical principles. And this difficulty is increased when we consider that the psychological expert, if he is an Empiricist, has to throw aside as untrustworthy the affirmations, as to their own immediate knowledge, of thoughtful persons who have given much attention to the subject—I mean the Intuitionist Metaphysicians, who say that they immediately know universal truths. If we admit these to be experts, I do not see how we can hope to establish the cardinal doctrine of Empiricism. Yet how can we exclude them, except by assuming the empirical philosophers to be the only real experts? and this seems hardly a legitimate assumption in an argument that aims at proving the empirical philosophy to be true. Nor is it any answer to this objection to show that Intuitionist Metaphysicians

have in certain cases affirmed as immediately known propositions that are not true; since the question is not whether error is incident to non-empirical cognitions, but whether we may legitimately assume that it is not incident to empirical cognitions.

But further, even supposing that we only recognise, as experts in discriminating immediate knowledge, persons who will not allow anything to be immediately known except particular facts, serious difficulties still remain; because we find that these experts disagree profoundly among themselves. We find—not to speak of minor divergences—that there is a fundamental disagreement between two lines of empirical thought which—if I may coin a word for clearness' sake—I will call respectively *materialistic* and *mentalistic*. When a Materialistic Empiricist affirms that physical science is based upon experience he means that it is based on immediate knowledge of particular portions of something solid and extended, definitely shaped and sized, moving about in space of three dimensions. Whether he regards this matter as also coloured, resonant and odorous, is a more doubtful question; but probably he would say that colour, sound, and odour are effects on the mind—or perhaps on the brain?—of the molecular movements of material particles. I can hardly profess to give a consistent account of his views on this point, if he is a thorough-going materialist, but it is enough for my present purpose that he at any rate believes himself to know immediately—through touch, if in no other way—matter with the qualities first mentioned.

The Mentalistic Empiricist, on the other hand, maintains that nothing can be immediately known except mental facts, consciousness or feeling of some kind; and that if we are right in assuming a non-mental cause of these mental facts—which he is generally inclined to doubt—we must at any rate regard this cause as unknown in every respect except its mere existence, and this last as only known by inference.

How, then, is Empiricism to deal with this disagreement? It cannot be denied to be rather serious; since, though materialism has plenty of support among philosophising men of science, the tendency of the main line of English empirical philosophy, from Locke downwards, is definitely towards Mentalism. I may observe that the more thoughtful Materialists, like Dr. Maudsley, do not exactly say that there are no mental facts which we may contemplate introspectively. But they hold that no scientific results have ever been reached by such contemplation; and they say very truly that physical science has always progressed by taking the materialistic point of view, and that there is no admitted progressive science of psychology, proceeding by the introspective method, which can be set beside

the physical sciences. Hence, they boldly infer that there never will be such a science; and in fact, they are inclined to lump the Mentalists along with Transcendentalists and others, under the common notion of "Metaphysicians" (used as a term of abuse), and to charge them all together with using the Subjective Method, condemned as fruitless by experience. The Mentalists do not quite reply in the same strain; indeed, they have rather a tenderness for the Materialists, whose aid, as against Transcendentalism and Superstition, is not to be despised. But they say that the Materialists are inexpert in psychological analysis, and that what they call "matter" is really, when analysed, a complex mental fact, of which some elements are immediately known and others added by inference. In so saying, the Mentalists appear to me to use the term "inference" loosely, and also to fall into the confusion before pointed out between the *antecedents* (or concomitants) and the *elements* of a cognition. Certainly I find myself unable to analyse my notion or perception of matter into feelings or ideas of feelings, tactual, visual, or muscular; though I do find that such sensation-elements present themselves as inseparable accompaniments of my notion or perception of matter, when attention is directed to it introspectively. But my object now is not so much to enter into this controversy between two sets of Empiricists, as to point out the serious obstacle it opposes to a satisfactory determination of the question what is immediate cognition.

Let us suppose, however, that this controversy has been settled to the satisfaction of both parties, in the manner in which some empiricists have tried to settle it. Let us suppose that both Materialists and Mentalists agree to affirm (1) that we immediately know the external world, so far as it is necessary to know it for the purpose of constructing physical science; (2) that we immediately know nothing but our own consciousness, and (3) that these two statements are perfectly consistent. It still remains to ask who are the "we" who have this knowledge. Each one of us can only have experience of a very small portion of this world; and if we abstract what is known through memory, and therefore mediately, the portion becomes small indeed. In order to get to what "we" conceive "ourselves" to know as "matter of fact" respecting the world, as extended in space and time—to such merely historical knowledge as we commonly regard not as "resting" on experience, but as constituting the experience on which science rests—we must assume the general trustworthiness of memory, and the general trustworthiness of testimony under proper limitations and conditions. I do not for a moment say that we have no right to make these assumptions;

I only do not see how we can prove that we have such a right, from what we immediately know.

At this point of the argument Empiricists sometimes reply that these and similar assumptions are continually "verified" by experience. But what does "verified" exactly mean? If it means "proved true," I challenge any one to construct the proof, or even to advance a step in it, without assuming one or more of the propositions that are to be verified. What Empiricists really mean, I conceive, by "verification" in this case is that these assumptions are accompanied by anticipations of feelings or perceptions which are continually found to resemble or agree with—though not identical with—the more vivid feelings or perceptions which constitute the main stream of consciousness. Now, granting that such resemblance or agreement may be immediately known, I yet cannot see that anything is gained towards the establishment of the cardinal doctrine of Empiricism. For there is a similar agreement between actual experience and the anticipations accompanying all the general propositions—mathematical, logical, or physical—which philosophers of a different school affirm themselves to know immediately; so that this "verification" can hardly justify one set of assumptions, as against the other.

If, finally, the reader who has got through this paper should say that my cavils cannot shake his confidence in experience, or in the aggregate of modern knowledge that has progressed and still progresses by accumulating, sifting, and systematising experience—I can only answer that my own confidence is equally unshaken. The question that I wish to raise is not as to the validity of received scientific methods, but as to the general epistemological inferences that may legitimately be drawn from the assumption of their validity. It is possible to combine a practically complete trust in the procedure and results of empirical science, with a profound distrust in the procedure and conclusions—especially the negative conclusions—of Empirical Philosophy.

H. SIDGWICK.

V.—NOTES AND DISSCUSSIONS.

THE SENSE OF SIN AND EVOLUTION.

THE ethical opinions of mankind may be said, broadly speaking, to have found expression in one or other of the rival schools of Intuitionists and Utilitarians. There is little practical difference in the precepts which emanate from these opposite sources, the real point at issue between them being the first principles from which these precepts derive their authority. It is plain that the moral conceptions of the man who regards the right as a large generalisation from the useful must differ widely enough from those of one who believes that the rightness or wrongness of an action is something wholly independent of its consequences ; that though the dictates of virtue and those of utility frequently coincide, they are never confounded ; and that we are enabled to distinguish and do distinguish right and wrong by means of some innate principle which determines our conceptions of these without any reference to utility. But however manifold may be the apparent points of difference, the foundations on which they rest are few and simple, and it is round these that the battle of discussion chiefly rages.

The sense of Sin which accompanies the breach of a moral law is one of the commonest, and at the same time, one of the strongest arguments of the Intuitionist on behalf of the existence of that innate moral sense which is the cardinal doctrine of his school. It is urged, and with considerable force, that the feeling of guilt which invariably follows the commission of an act *recognised* as wrong, is as invariably absent from the feelings which ensue on a mere disregard of the dictates of utility : and from this it is plausibly inferred that the idea of the right is generically different from the idea of the useful. It is hardly necessary to observe that both parties to the discussion seek their facts in the experiences of a moral man ; for the indifference of a man devoid of moral principle is of no evidential value to either. At first sight it might appear that so fundamental a difference must be incapable of removal by any philosophical subtlety ; but the school of Evolution claims to have reconciled these apparently conflicting creeds, and to have fused in a deeper synthesis the superficial antagonism which divided them. The dispute between the two philosophies is declared to be due to an imperfect appreciation on either side of the full significance of a common set of facts, and their reconciliation is effected by showing that, on the one hand, the Utilitarians are correct in referring the *ultimate* origin of moral ideas to the dictates of expediency, and on the other, that the Intuitionists are completely justified in asserting that in the man of the present day, or at least in civilised man, there is a moral sense whose promptings are wholly irrespective of any estimate of pleasure or pain.

Accepting as correct the main points of the Evolutionist explanation, it yet appears to me that no completely satisfactory account of the origin of the sense of sin has so far been given by this school of philosophy, and it is on this subject that I shall endeavour to throw out a few suggestions in the present paper.

As a preliminary step it will be useful to trace briefly the general line of the Evolutionist argument. The moral sense is declared to be not ultimate but derivative, and built up out of slowly organised experiences of pleasure and pain. Now it is clear that, as a rule, pleasure must be the concomitant of acts which are beneficial to the individual, and pain the concomitant of acts which tend to his prejudice, for otherwise the species must infallibly perish : and this is as true of the community as of the individual. But while in the case of the individual, pleasure and pain are the motives which respectively prompt or prohibit beneficial or injurious actions ; in the case of the community the place of these motives is supplied by a sense of right and wrong, that is, according to the Evolutionist explanation, a sense that a certain action or class of actions is beneficial or injurious to the community. That this is a difference not merely of quantity but of kind is evident from the fact that the good of the community and that of the individual may easily conflict. But in seeking for the origin of this sense, we are not to conclude that the moral judgment which we pass on any act is the result of a conscious deliberation as to its effects on the community, for we are instantly confronted by the fact that our approval or disapproval of certain actions is quite instinctive. Nor again is this instinctiveness to be explained, as we might be tempted to explain it, by regarding it as the outcome hereditarily transmitted of a long series of ancestral deliberations to the same effect. Its true origin is to be found in the sense of sympathy, which, when duly developed is as keenly alive to an injury, real or represented, to the community as the individual organism is to a physical injury. The growth of this sense of sympathy, for which most gregarious animals possess a rudimentary capacity, is attributable to a variety of causes, but mainly to the lengthening of the period of infancy which is found to accompany a growing complexity of intellect. It is impossible to enter at length upon this most interesting subject within the necessary limits of the present paper, but it may suffice to say that the point is most ably argued by Mr. Fiske (*Cosmic Philosophy*, II., ch. xxii.), whose conclusions are supported by the experiments of Mr. Wallace. The effect of this prolonged infancy in promoting the development of sympathy is so admirably set forth by Mr. Fiske (*Cos. Phil.*, II., p. 344), that I cannot do better than transcribe the *ipsissima verba* of his explanation.

“The prolonged helplessness of the offspring must keep the parents together for longer and longer periods in successive epochs ; and when at last the association is so long kept up that the older children are growing mature while the younger still need protection, the family relations begin to become permanent. The parents have lived so long in company, that to seek new companionship, involves some disturbance of engrained habits ;

and meanwhile the older sons are more likely to continue their original association with each other than to establish associations with strangers, since they have common objects to achieve, and common enmities, bequeathed and acquired, with neighbouring families. As the parent dies, the headship of the family thus established devolves upon the oldest or bravest, or most sagacious male remaining. Thus the little group gradually becomes a clan, the members of which are united by ties considerably stronger than those which ally them to members of adjacent clans, with whom they may indeed combine to resist the aggressions of yet further outlying clans, or of formidable beasts, but towards whom their feelings are usually those of hostile rivalry.'

When this sense of sympathy, which is in effect a sense of collective pleasure or pain, is once called into existence, it becomes to the individual a motive of action generically akin to his sense of individual pleasure and pain, and, like these, gives rise to pleasurable and painful associations, but connected respectively with the furtherance and violation of the common weal. We must be careful however to note this important distinction between the feelings of individual and of sympathetic pleasure and pain, namely, that whereas the feelings connected with individual pleasures and pains are purely egoistic or self-regarding feelings, those connected with sympathy are what Mr. Spencer calls "ego-altruistic" feelings; that is, they concern the happiness of the individual in so far as it depends upon the feelings with which his fellow-creatures regard him. Consequently, we are not justified in describing as selfish the actions which are dictated by sympathy, though all sympathy is in its origin a kind of self-pleasing.

The next stage of moral development is marked by the appearance of the feelings of regret and remorse, which are explained to be the fundamental ingredients of conscience, and which owe their power, if not their existence, to the comparatively transient character of the pleasures attending the gratification of the purely selfish impulses, as contrasted with the permanent operation of incentives to actions beneficial to the community. Consequently, though under the overpowering influence of immediate desire a man may gratify some self-regarding impulse at the expense of the community, the abiding force of the social sanctions forbidding the act (which are ever present to the mind, though necessarily somewhat in the background) will sooner or later cause him to feel that dissatisfaction with himself, accompanied by a resolve to act differently in the future, which is the earliest beginning of conscience. Finally, there comes a class of supernatural sanctions attached to violations of the interests of the community, which, springing from the dread of the savage for the vengeance of his dead chief, finds its latest expression in the Gehenna of civilisation.¹

¹ The above account of the growth of the moral sense has been taken mainly from Mr. Fiske's *Cosmic Philosophy* (II., ch. xxii.), with references to the works of Mr. Spencer, Mr. Darwin, and other writers of the Evolutionist school. From the nature of the present essay it is of course inevitable that I should borrow largely from such sources, and I may perhaps be

Such is the outline of the development of the moral instincts on the principles of Evolution. But while admitting the general accuracy of the account, it appears to me that it offers no adequate explanation of that sense of sin which is the subject of the present essay. The moral feelings and distinctions with which the theory deals rest ultimately on a basis of pleasure and pain, and I for my part agree that this is the true basis. But it seems to me still open to the Intuitionist to maintain that it has failed to explain that particular pain which constitutes, or is at any rate the source of, the sense of sin. The question is indeed touched, though only touched, in the account given above of the genesis of regret and remorse; but the solution offered is meagre and vague, if not wholly unsatisfactory. And here I may remark that I cannot acquiesce in the view that regret and remorse are generically identical; on the contrary it appears to me that their respective origins are perfectly distinct. Strictly speaking, the feeling of remorse follows only on actions which involve a breach of duty; regret on the other hand is constantly felt in connexion with actions which contain no moral element whatever. A man, walking to catch a train, by pure accident loses his way and accordingly misses the train. He is thereby prevented from keeping an appointment, and a series of disastrous consequences is the result. But however much he may regret these consequences, it is impossible that they should cause him any remorse. That he should have occasioned their occurrence is his misfortune but not his fault, and in the absence of fault I submit that the feeling of remorse cannot arise. It is true that this feeling is often accompanied by the feeling of regret, but even where they relate to the same conduct, a careful analysis will show that they are distinct alike in character and in origin, and it behoves us to be on our guard against confounding them. But to proceed with my criticism. These *internal* sanctions of regret and remorse which enforce the observance of the laws of what I may perhaps call social morality, are represented as differing only in massiveness and continuity of operation from those which attend the violation of the good of the individual. In other words, the distinction is one not of quality but of amount. If this be true a similar feeling of remorse ought to attach, at any rate in some degree, to any act tending to injure individual welfare, the commission of which is prohibited by a sufficiently powerful sanction. Under ordinary circumstances death is the most dreaded of evils. It is the last punishment which the vengeance of the community can inflict on the offender who has transgressed its laws, statutory or moral; and of course where the individual alone is concerned, the extinction of his existence, and of the pleasures which existence makes possible, is the very thing which his whole conduct, positively or negatively, aims at averting. Yet we do not find, as a rule, that an unnecessary risk of life entails any regret, and still less any remorse on the individual

allowed, in lieu of a succession of separate references, to acknowledge my obligations to them collectively in this note.

who runs the risk.¹ It is, I think, plain that so far as the dissatisfaction which ensues on a breach of social morality is due to a recognition, inherited or otherwise acquired, of the pains and penalties which the injured community may exact, it contains no trace whatever of that which we now understand by the feeling of remorse. I must not be understood to deny the existence of this feeling as one of the avenging sanctions which visit with swift retribution the violation of a moral law; but I venture to differ from the current doctrine of Evolution in believing that its origin is to be found, not in a dread of the punishment which the community will or may exact for the misdeed, but in the associations connected with a somewhat different source of dissatisfaction. The consideration of this last-mentioned source of dissatisfaction is the ultimate purpose of this paper; but, before proceeding to discuss it, it will be well to pursue somewhat further our examination of the teaching of the Evolutionists on the subject.

A little reflection will convince us that the sense of sin attaches not only to acts which injure the community, but also to many acts whose injurious effects are strictly confined to the individual. Nor does the Evolution-theory fail to take cognisance of this; indeed it is in this fact that it purports to find the connecting link between religion and morality. But the religion here referred to is distinct from the popular anthropomorphic religion, consisting as it does in the recognition of

"A Power to which no limit in time or space is conceivable, of which all phenomena, as presented in consciousness, are manifestations, but which we can know only through these manifestations" (Fiske, *Cosmic Phil.* II., 414). Consequently while "a philosophy of morality has for its subject-matter the principles of action conducive to the right living of the individual so far as the well-being of the community is concerned; so a philosophy of religion has for its subject-matter the relations of the individual to the Inscrutable Power manifested in the universe, and the principles of action conducive to his right living considered as a part and parcel of the universe" (p. 465). Thus, as "on the anthropomorphic hypothesis, sin is an offence against a personal Deity, consisting in the disobedient transgression of some one of his revealed edicts"; so "from the scientific point of view, sin is a wilful violation of a law of nature, or—to speak in terms of the theory of evolution—it is a course of thought or action, wilfully pursued, which tends to throw the individual out of balance with his environment, and thus to detract from his physical or moral completeness of life" (p. 455). "Now when a law of nature has been violated (to use the current phrase) the religion of the scientific inquirer tells him that a sin has been committed; and he is smitten with a sense of self-reproach no whit less keen than that experienced by his mediæval predecessor. . . . Regarded as a product of psychical evolution, this sense of sin, peculiar to the most highly developed organisms, is the analogue of the sense of pain shared in

¹ It must not be supposed that I ignore the moral obligation incumbent on each individual of maintaining his physical well-being, which is so admirably expounded in Mr. Spencer's *Data of Ethics*. But a doctrine which is scarcely yet appreciated in the 19th century, can hardly have been an active force in the genesis of moral ideas.

some degree by all organisms endowed with consciousness. The sense of sin, like the sense of pain, is normally deterrent from actions which tend to diminish the completeness of the correspondence in which life consists. But while the sense of pain is common to those creatures whose incentives to action are purely selfish, the sense of sin can be possessed only by those creatures whose intelligence is sufficiently complex to enable them to recognise the relationship in which they stand to the Omnipresent Power, and whose highest incentives to action are therefore quite impersonal" (p. 456).

I have quoted Mr. Fiske not only to gain the benefit of his able exposition of this account of the sense of sin, but also because he is, so far as I am aware, the only Evolutionist writer who has treated this point at all in detail. The development and justification of the principles of morality have met with ample consideration at the hands of Mr. Spencer and others of the Evolutionist school; but this particular sanction has, I think, as a rule been unduly ignored.

Now it will be seen that the feeling of remorse attending the violation of the laws of social morality, and the sense of sin arising on the commission of an act which is immoral only in its relation to the individual, are referred by the above account to two distinct sources. The feeling of remorse is traced to a dread of the vengeance of the community; the sense of sin is said to be the analogue of physical pain, caused by an injury to what may be described as a moral nervous system. It appears to me that this distinction cannot be upheld. The testimony of individual experience surely declares that the feeling of remorse and the sense of sin, as at present manifested, are indistinguishable. The reproaches of conscience which follow on the commission of a social wrong, *e.g.*, theft, do not differ in kind from those which arise in retribution for our secret sins against our own individuality. Their torments may vary in degree, but in quality they are identical; and if this be so, there is at any rate a *prima facie* presumption that their sources are identical also. I have already endeavoured to show that a dread of the vengeance of the community cannot be accepted as the origin of the feeling of remorse; it therefore remains to consider whether the sense of sin can be correctly referred to a feeling of moral injury to the organism analogous to the sense of physical pain. Now in the first place we must observe that this "psychical analogue of physical pain" appears on the scene rather in the guise of a *deus ex machinâ*. It leaps into the ranks of moral sanctions like an Athênê in full panoply of war from the brain of Zeus, and, speaking with all the respect that is due to a writer of Mr. Fiske's learning and ability, I must confess that its introduction seems to me a little unscientific. All philosophy worthy of the name strives to base its doctrines on a body of causally connected truths depending as little as possible for their coherence on the presence of uncaused entities. But as Evolutionists we are peculiarly bound to trace with rigorous exactness every step in the theory propounded for acceptance; and in the present instance this necessity seems to have been somewhat overlooked. This account offers no explanation of the different stages in the development of the sense of sin, nor of its presence under condi-

tions which are undoubtedly prior to the possession of an intelligence sufficiently complex to recognise its relationship to the Omnipresent Power. Such an intelligence can hardly be ascribed to mankind as a whole at the present day ; but the sense of sin, so far as we are in a position to judge, dates back for centuries. I am far from denying that the sense of disturbance of our relations with the Absolute entailed by a sinful action would be one of the strongest deterrents against its commission ; but I cannot think that such a complexity has as yet been widely attained even by civilised mankind. I do not say that the explanation is impossible, but I do venture to think that it is at present incorrect.

If then I am right in supposing that the feeling of remorse should not be regarded as distinct from the sense of sin, it remains to inquire to what origin are we to refer the sense of sin. It appears to me that it springs originally from, and even now ultimately rests on the sense of inferiority which is one of the painful results of the violation of a maxim either of social or of self-regarding morality. When an immoral act is committed—be it a wrong to the community or a wrong to the individuality of the sinner—there always follows (except in the case of an ἀκολαστός where the moral principles are destroyed) a feeling that we should somehow be in a better position if the act had not been committed. This feeling is not, as I imagine, the recognition of a disturbance of relations between ourselves and the Absolute ; nor is it, except indirectly, a dread of the penalties which the act may entail from the wrath of an injured community. The rules of morality which govern our actions, formulated as they are from a registration of the pleasurable or painful consequences by which these actions are followed, are in very truth a formulation of the conditions of a happy and successful life. The imperative power of the law remains long after its rationale has ceased to be present to consciousness ; and accordingly, though the modern sense of sin seems to us primordial and self-justifying, I believe that it ultimately rests on a primitive experience that an act of immorality places us at a disadvantage with our neighbours in the struggle for existence. It is not a fear of what the community may exact in retribution, except so far as the community be held to be entrusted with the execution of that merciless law of the survival of the fittest, which it may be said to enforce in spite of itself. But this is a purely negative effect of social influence, and what we really dread is the natural result of the act upon ourselves. Nor, as I have said, can it be regarded, at any rate in its earliest stages, as a sense of violation of our relations with the Absolute ; for an idea of such complexity as this is quite out of reach of the rudimentary intelligence which accompanies the first growth of moral sanctions. On the other hand, I venture to think that it supplies an adequate explanation of the difficulty to which the Intuitionists triumphantly point as unsolved and unsolvable by any school except their own. The *differentia* of the sense of the sin, whereby it is distinguished from the other internal sanctions of morality, is the peculiar and perhaps indescribable sting which it inflicts, and which it is

utterly beyond the power of mere penalties, however heavy, to produce. But it is precisely this sting which is one of the most marked effects of the feeling of inferiority, as may be seen by a comparison of the torments produced by jealousy, which is another form under which a sense of inferiority, real or imaginary, is expressed, though in a somewhat different connexion.

There can be little doubt, I think, that this sense of inferiority made its appearance at a very early stage in the moral development of man. The first determinants of action are certainly to be found in the pleasures and pains immediately attending the various kinds of conduct possible to primitive man. The dread of retaliation must clearly have operated as a deterrent against the commission of an injury to his neighbour, or to the community. The next stage was reached when injurious actions became classed as things to be avoided in themselves; and at this point the maxims of morality became absolute laws so far as the individual was concerned, because, in addition to the external penalties which their violation involved, their observance was further enforced by the internal sanction of a subjective feeling in their favour, of which a painful breach was caused by a vicious action. It is true that the real origin of the rule became in this way partially obscured, because it was mainly built up of transmitted ancestral experiences wherein the rule survived but not the reason—the *δῆμι* without the *δίοτι*; but none the less was its binding force derived from a conviction that in obeying it men ministered in some way perhaps imperfectly understood to their own welfare. In modern times a neglect of individual welfare may be largely counterbalanced by accidental advantages, such as inherited wealth, the assistance of powerful friends, and so forth; but in early communities not only was the struggle for existence much more severe, but the fortune of every individual depended almost, if not quite, exclusively on his own capabilities and conduct. In such a community any neglect or violation of the conditions of success would be followed rigorously by its natural consequences. Cowardice or treachery in battle against the common foe, or a breach of such rude faith as might obtain between savages would bring immediate retribution in the shape of retaliatory injuries or even death. But apart from these, there would be a further punishment in store for the offender in the fact that his past misdeeds would stand in the way of his future advancement. The coward or traitor if not killed outright would be deprived of his share of future spoils, as well as of any prospect of pre-eminence in his clan, with the concomitant privileges and benefits which such pre-eminence might confer. In the same way the perpetrator of a private injury would find himself thwarted, not only by the animosities which his actions had kindled, but by the withdrawal of the confidence (however rudimentary it might be) of those whom he had injured. At this stage no doubt any extensive failure of the external penalties which accompanied misdeeds might have caused a disappearance of the feeling that such acts were bad even in the absence of these penalties; in which case the internal sanctions,

including the sense of inferiority, must have perished also. But our knowledge, so far as it goes, of the conditions of primitive society forbids us to suppose that such a failure can have taken place; and we may therefore reasonably conclude that the sense of inferiority, as an internal sanction enforcing the maxims of early morality, is at least as early in point of time as the first growth of the feeling that injurious acts are *mala in se* apart from the external penalties which may attend them.¹

If this be so, it is easy to understand the immense value as well as the immense strength of the sense of inferiority as a moral sanction. The moment the conception of immorality as an evil apart from its consequences arises in the human mind, the sanction of inferiority springs up by its side, an ever present and ever watchful guardian of the moral law, a prophet and an avenger, whose warnings are heard in the voice of conscience and whose vengeance is experienced in the pangs of remorse. When this stage of moral progress has been reached, the certainty of external retribution becomes of less importance, so far as the individual is concerned, to the due maintenance of the moral sense; for whether a particular breach of moral law be detected or not, the sanction of inferiority rises up unflinchingly in judgment against the offender, and, through the medium of hereditarily transmitted experiences, with ever increasing strength through succeeding generations.

It is this omnipresence and continuity of operation which constitutes one great source of the strength of the sanction. The other is to be found in the desire and dread of power which are feelings common to the whole of humanity, and which are peculiarly prominent among the less civilised races. The reverence of power is sufficiently intelligible under social conditions where might was practically right, and physical conditions which confronted the slender resources of primitive man with the stupendous and untamed energy of the forces of nature. But without dwelling longer on the origin of this reverence, it is necessary to touch briefly on its relation to the sense of inferiority now under discussion. The reverence of power, as I have said, combined the two elements of dread and desire, and to each of these the sanction of inferiority lent a well-nigh imperative force. The desire of power led naturally to a desire of the means of attaining it. These obviously consisted of excellence of all kinds, including of course moral excellence, however scanty the content of the term may have been. Similarly, power being an object of dread as a hostile external influence, every form of inferiority, moral or other, diminished the individual's capacity for resisting its attacks.

Thus it will be seen that the consequences of inferiority are not

¹ It is not impossible that the operation of this sanction may have been felt even at an earlier stage of moral development, but so long as the stern penalties of retaliation were the principal deterrents from injurious action, the more delicate restraint of internal sanctions can hardly have had much practical effect.

limited to a single definite penalty, which may or may not be avoided, but include all the possible injuries which can result to the organism from an imperfect adaptation to its environment. And its efficacy as a sanction lies not only in the wide range of external evils to which it exposes the individual, but in the inward torments of the peculiar sting by which it is normally accompanied. Such I conceive to be the origin, and such the justification of the sense of sin.

In conclusion it may be useful shortly to re-state the position I have sought to establish, in its relation to Intuitionism, Utilitarianism and Evolutionism respectively. The Intuitionist regards the sense of sin as directly due to a violation of the categorical imperative of duty. But to this it may be objected, first, that the existence of this maxim, as something originally innate, has been and still is vigorously disputed; secondly, that its proof or disproof is rendered impossible by the transcendental character claimed for it, whereby it is at once placed beyond the reach of an investigation which could only be conducted under the conditions of relativity. Passing to Utilitarianism, we find that the sense of sin is referred to a conscious or unconscious estimate of pleasure and pain. Against this may be urged the objection of the Intuitionists that, on the testimony of consciousness, the sense of sin which attaches to the idea of the wrong is generically distinct from the sense of pain which is associated with the idea of the unprofitable. Finally, according to the theory of Evolution, the sense of sin is a "psychical analogue" of the sense of physical pain, but, unlike physical pain and the remorse which attends the violation of a law of social morality, can only be felt by an intelligence sufficiently complex to recognise the relationship in which it stands to the Absolute and Inscrutable Power, which, though the cause of all things, is only known to us in its phenomenal manifestations: in short an intelligence which is capable of discerning that the laws of nature are, in the deepest and truest sense, the decrees of God.

In criticism of this view, I have attempted to point out (1) that the distinction raised between remorse and the sense of sin cannot be upheld; (2) that in this account the growth and development of the sense of sin are left in considerable obscurity; (3) that the sense of sin is actually found in societies and individuals where no such complexity has been attained.

My own explanation of the sense of sin I have given above as fully as the necessary limits of the present discussion permit. I cannot of course pretend to have treated the subject exhaustively, nor indeed to have done more than delineate in the barest outline the theory that I advance. But if I have succeeded in representing intelligibly its general character, I shall have attained all that I hoped for, and indeed all that I attempted.

NORMAN PEARSON.

MR. GURNEY ON THE UTILITARIAN 'OUGHT'.

WHEN there appeared in the last No. of *MIND* an article by Mr. Gurney, proposing to deal directly with that desperate little word 'ought'—a word which seems to contain within its small compass the alpha and omega of all the more fundamental difficulties of ethical science—most persons who have made that science a study will have felt their interest roused. And those who, like myself, hope to see these difficulties reduced by the final resolution of every 'ought' into an ordinary scientific 'is,' will have rejoiced to find that it was Mr. Gurney's aim to effect such a resolution. My own regretful feeling that he has not, however, been herein successful is probably shared by many, and I venture the following criticism upon his treatment.

Mr. Gurney's aim, as he himself states it on p. 350, is to show that the fundamental utilitarian principle, "I ought to do that which promotes the greatest happiness" is "not simple but compound," and "is made up of two simple elements, an ultimate *fact* and an ultimate *axiom*, which fact and which axiom are both in nature entirely scientific". He argues, that starting from such simple psychological propositions, as, "I feel a desire for my own happiness," or "I feel a desire for somebody else's happiness," or (it may be) "for the general happiness," we can pass directly from these—which are in no sense ethical propositions—to an axiom, or general principle, which, while it also is strictly scientific in form, will nevertheless furnish the required basis for utilitarianism. For, as soon as in sequence upon the above desires, we have become alive to the fact of the existence of various lots of happiness, variously distributed among individuals, and have also become alive to the possibility of conflict among them, we are obliged as rational beings to conclude that the greater happiness should always be preferred to the less—even when the less happiness is our own, and the greater is that of other people. We arrive at the knowledge of this axiom by reflection upon our particular desires for our own or somebody else's happiness, and upon the existence of happiness, actual or possible, outside this, just as we arrive at the knowledge of the axiom "a whole is greater than its part" by reflection upon the nature of certain wholes and certain parts. It would be as irrational, Mr. Gurney maintains, to accept the facts in the former case and yet reject the principle relating to them, as it would be to do so in the latter case. To prefer the happiness of x alone to the greater happiness of $y + z$ is as absurd as to treat one unit of anything as equal to two. Of course Mr. Gurney will allow that people may prefer being absurd to being moral, if their morality costs them a sacrifice, but he has the satisfaction of pointing out to them that if they are immoral they are so in the teeth of demonstration.

We may wonder why the word 'ought' is introduced at all into the utilitarian maxim when this strictly scientific view of it is taken; but Mr. Gurney explains that it is not introduced into it in any sense

in which it may not also be introduced into a mathematical axiom. We mean nothing more by it, he says, than we do when we say that any one who considers whether a whole is greater than its part, *ought* to decide in the affirmative. It may strike us that the parallel proposition to this would be, not the one given above, but, that 'any one who considers whether the happiness of $x + y$ is greater than the happiness of x or y taken singly, ought to decide in the affirmative'. Such a proposition, however, would scarcely serve our ethical ends; so let us consider how Mr. Gurney's explanation applies to the principle he has actually given us.

"Ought" in the proposition first quoted must surely mean one of two things: either, that the person who does not decide that a whole is greater than its part will have to face the flat contradiction of experience, or else, that the proposition named must be accepted under the penalty of thought-annihilation—the opposite of it being inconceivable. But how can either of these interpretations be possibly applied, on the given basis, to 'ought' in the proposition, "The greatest happiness *ought* to be preferred"? We surely cannot maintain that a person's selfish preference of his own happiness to the greater happiness of others cannot practically be enforced; nor can we maintain that it is psychologically impossible to desire or to seek one's own happiness more than that of others. Where then is the parallel between the latter 'ought' and the former?

Starting from such a basis as that which Mr. Gurney has given us, namely, the existence of a desire for something, and adopting his method of comparing the object of this desire with other similar objects, it would seem that we might with at least equal show of fair argument obtain conclusions which would be directly opposed to the one at which he is aiming. We overhear some one maintaining that because he finds himself pursuing now this item of his own happiness and now that, and because he can conceive many more items than these as attainable, he therefore feels bound as a reasonable being to endeavour to secure them all, even at the sacrifice of others' happiness. Or, passing to different ground, might not the argument be that because I desire to eat my own dinner and there are many other dinners to be had, as good or even better than mine, I should therefore as a rational being endeavour to eat them all?

As the explanation of Mr. Gurney's point of view obviously cannot be found here, we must seek it elsewhere, and I think we may seek it successfully, if we attend carefully to his statements of those simple psychological facts which are to lead us up to the axiom. There may be a world of difference in the meaning of two such propositions as 'I feel a desire for my own happiness,' and 'I recognise my happiness as an end'; the former can never be more than the statement of a simple psychological fact, but the latter may be a truly ethical proposition in disguise; it may mean and generally does mean that I regard my happiness not merely as an end at which I *do* aim, but as an end at which I *ought* to aim. These two meanings are frequently confused in Ethics under the word "desirable," and to this

fact Mr. Gurney himself explicitly calls attention on p. 351; but we cannot therefore feel bound at once to set him free from all charge of having in his own argument fallen a prey to a similar ambiguity; unfortunately, it is no rare thing to find even the best of thinkers tumbling themselves into a pitfall, while they are in the very act of commenting upon the disasters it has occasioned to others. If we refer to p. 354 we find Mr. Gurney arguing as follows. Starting merely "on the understanding that a certain thing is the thing actually by me more desired," we apply an axiom and get an "*ought*," which we retain "even when that thing has become, it may be, the thing by me less desired". And our justification is, that "of two things which are essentially ends, the greater, *i.e.*, that which has most end-stuff in it, must *quâ* end prevail"; that "the perception of the *more* end-stuff, the *more* of that the essence of which is to direct action, cannot be affected by the fact that the *less* with which it is compared has its place in *my* mind, and through that momentary proximity *looks* more to me. And what my egoism may make it impossible for me to prefer in my actual desire still remains for me what it is reasonable to aim at in my conduct." Here the conception of my happiness as *having* "*end-stuff*" in it, is substituted for the former representation of it as a thing simply *by me desired*; and although it is possible to use the two phrases in an identical sense, they are not at all likely to be so used; and Mr. Gurney's argument leads us I think to the conviction that he has not so used them.

If the phrases, 'my happiness has end-stuff in it,' and 'other people's happiness has end-stuff in it,' mean nothing more than that my happiness stirs desire in me and that theirs stirs desire in them, what possible interpretation will this enable us to put upon the assertion, that that which has more end-stuff in it than my happiness must reasonably prevail over my happiness in the determination of my conduct? It can in consistency mean only that that which stirs more desire in me than my own happiness should (or rather we may then say *will*) prevail with me. Mr. Gurney goes on to explain in the sentence last quoted from him, that although we do not perhaps actually prefer the greater happiness of others to our own less happiness, we can yet *perceive* that there is more of end-stuff in it and we should act accordingly; but how can we (in accordance with our premisses) perceive that it has more end-stuff in it, if as a fact it does not give rise to more desire in us? To say that I perceive that there is, in the happiness of the many, more of that "the essence of which is to direct action," does not mend matters; for this can only mean that as each person's happiness tends to stir desire within him, the happinesses of many will tend to stir many desires and direct a greater number of actions; and what has this to do with the direction of *my* conduct,—which is the point we are anxious to reach?

All this seems to end in reducing us to the conclusion that Mr. Gurney's "*ultimate fact*" was not quite so simple as he supposed, and that, under the guise of the proposition "I desire my happiness," such

a proposition as 'I recognise my happiness as being an end-in-itself *quâ* happiness' was virtually introduced; and this is equivalent to 'I judge that my happiness *quâ* happiness *ought* to be sought,'—a distinctly ethical proposition, and one which brings us back to all the old ethical puzzles which Mr. Gurney was seeking to avoid. We now find ourselves exactly in the position to which Mr. Sidgwick has already brought us in *The Methods of Ethics*, Bk. iii. ch. 12, and Bk. iv. ch. 2; and Mr. Gurney's grounds for passing from the above individualistic ethical proposition to a universalistic one can scarcely be other than those which Mr. Sidgwick there gives us. If a person says, 'my happiness *quâ* happiness is *good ultimately*, and as *good* ought to be sought by me,' we can then point out to him that in consistency with this statement he cannot refuse to regard as worthy of his pursuit other happinesses than his own, and in proportion to their magnitude. In saying '*quâ* happiness,'—or, as Mr. Sidgwick puts it, in regarding "his happiness as good not only *for him*, but absolutely," he has rendered it logically impossible for himself henceforth to hold that his own particular portion of the good may be pursued to the detriment of other portions. He cannot, without recalling his words, now limit the end which he has thus postulated, by a determination of it in sole relation to himself; all such limitation in practice must appear purely arbitrary, *i.e.* irrational. If, however, his postulate had been that 'my happiness ought to be the aim of my conduct, not *quâ* happiness merely, but *quâ* my happiness,' there would have been no basis for transition to Universalistic Hedonism. That Mr. Gurney finds fault with Mr. Sidgwick for making this distinction (see pp. 359, 360) is additional evidence of the correctness of our general criticism. He maintains that in both cases the argument for the Universalistic principle will equally hold; but, in the case last mentioned, it seems to me that this principle would land us in the inconsistency from which in the former case it freed us; we should be reduced to the absurdity of proclaiming that, because we regard our own happiness as the sole fit and proper end for us to pursue, we feel bound to subordinate it to some other end, namely, the general happiness! Mr. Gurney would here say, however, that this regarding of our own happiness as an end which ought to be aimed at, irrespective of all other happiness, is itself an absurdity of the kind he is arguing against, and that therefore we cannot consent to take it as a datum; we can only allow it force when it has been modified by the exclusion of all reference to other happiness than our own, *i.e.*, when no comparison or conflict has arisen between them. When it *is* thus modified, he adds that 'I ought to aim at' means nothing more than that 'I choose or mean to aim at'. But this leaves the further question unsettled, whether, if we accept the latter form of expression, it is to be taken to mean that 'I choose my happiness *quâ* happiness,' or that 'I choose it *quâ* mine'. If the former be the proper interpretation, we can then no longer regard the proposition as purely psychological; it is not equivalent to a statement of the facts, 'I feel a desire for my happiness,' or 'I do actually

pursue my own happiness'; it involves an 'ought' in the old-fashioned ethical sense; it means, that although I may not so far have pursued or desired any happiness except my own,—my attention perhaps never having been directed to any other as possibly affected by my conduct,—yet that I regard Happiness *in itself*, Happiness anywhere and anyhow, as that in reference to which alone conduct should be determined. If, however, the proper interpretation be 'I choose my happiness *quâ mine*,' and if we grant Mr. Gurney his anti-egoistic ethical postulate, namely, that an 'ought' cannot be here implied, we have then indeed a purely psychological proposition,¹ the mere statement of the existence of a certain desire or volition; but, as we have already seen, such a one will not afford us any aid in our endeavour to prove the first principle of Utilitarianism.

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DEFINITION OF REASON.

THE three methods by which Reason, like Sensation, may be best defined are analysis, discrimination, contrast; and it will be convenient, in handling the term, to follow the order that is here laid down. The allied group is *Reason, Reflection, Judgment, Reasoning*; and the contrasting words—*Sense, Passion, Instinct, Faith*.

I. Reason (A.-S. Understanding)² has often been regarded as the power or faculty of the mind that apprehends Truth. But objection may be taken to this on the score of vagueness: for *every* faculty, in the ultimate analysis, has truth (some truth) for its object, and Reason vanishes into thin air if we assign to it the province of truth in the abstract.

Sometimes its function is limited to the apprehension of truths self-evident or intuitive; and self-evidence is said to attach to first principles and to simple ideas—such principles, that is, as command our assent without our being able to assign a reason for it, and such ideas as cannot be resolved into others more simple or more fundamental. For an explanation of this usage, we must go back to the Greek *νοῦς*. And yet the Ciceronian Latin for *νοῦς* is not *ratio* but

¹ We should perhaps note here that there is a sense in which this proposition may still be regarded as ethical, though it is a sense which Mr. Gurney has not brought under discussion, namely, when it is employed to express the reasonable choice of my happiness as a whole—of my maximum happiness—as contrasted with my actual desires for enjoyments of the moment which may conflict with the attainment of the maximum happiness.

² The two are properly synonymous; but, so long as mental phenomena were classified as Understanding and Will, Understanding had a considerably wider sense than Reason, and it is significant that Locke's *Essay concerning Human Understanding* covers the whole province of Mind.

mens, and Boëthius's¹ translation is *intelligentia* or *intellectus*.² *Intellectus* also, in Boëthius, represents *νόημα*, and, in the plural (*intellectus*) *νοήματα* (see his *De Interpretatione*, *passim*); while a distinction is drawn, in the *De Consolatione Philosophiæ*, between *Ratio* and *Intelligentia*. The former is human and discursive, the latter intuitive and divine; and, in Lib. IV., pr. 6, *Ratiocinatio* (a function of Reason) is represented as standing to *Intellectus* in the relation of the variable and progressive to the permanent and constant. Elsewhere (V., 4), he arranges the mental faculties in an ascending order thus—*sensus*, *imaginatio*, *ratio*, *intelligentia*. Nor does Boëthius stand alone. All along, throughout the middle ages, a special dignity attaches to *Intellectus* over *Ratio*; and, even with ourselves, such a phrase as "Intellectual controversies" or "an intellectual system" has a particularly imposing sound. Thus, the leading term in St. Anselm's famous ontological argument for the existence of God (in the *Proslogion*) is just this word *Intellectus*; and it is through the Intellect, according to Aquinas, that man ascends to God in prayer. Indeed, *Ratio* in Scholastic Latinity is quite overshadowed by *Intellectus*; and, if we except such a passage as that from Augustine quoted in MIND XXVI., 306 (a passage that is almost unique), the idea of a noetic Reason must be regarded as emphatically modern. Hamilton refers it to Crusius and Kant; but the English antithesis of "Reason discursive or intuitive" is Milton's. Yet, it is this *noetic* sense of the term that is avowedly accepted by intuitionist philosophers of the present day, and that plays such a conspicuous part in intuitionist Ethics. Nowhere, however, so far as we are aware, is the application strictly or consistently adhered to. On the contrary, though placed as the keynote at the opening of the exposition, it soon disappears as the argument proceeds, and other significations more prolific of results, adroitly handled and at first surreptitiously introduced, come by and by to supersede it, until at last the transition grows sufficiently apparent in the repeated

¹ It may be mentioned, in justification of the prominence given to Boëthius in these Notes, whenever a point of history is concerned, that three princes ruled in mediæval and scholastic times—Boëthius (translator of Aristotle and commentator on Porphyry) in the realm of Philosophy, Virgil in Literature, and Augustine in Theology.

² A certain historical interest attaches to the fact, that the favourite Vulgate rendering of *νοῦς* in the N. T. is *sensus*: even *νοῦς Κυρίου* is *sensus Domini*. Sometimes also *mens* is employed as a synonym, but only once in N. T. (*viz.*, *Apoc.* xiii. 18) do we find *intellectus*; although *intellectus* in one passage (*Eph.* iv. 18) is translated *διάνοια*, and *νόημα* is represented both by *intellectus* and by *intelligentia*. *Λόγος*, on the other hand, which is the proper Greek for *ratio* (as well as for *oratio*), finds its Vulgate equivalent in either of the two words *verbum* or *sermo*. It is translated *ratio* only in the signification *reckoning* (*computatio*), or when it is employed in the phrase "reddere rationem" (to give account). *Rationabilis*, however,—a Boëthian adjective also, but remounting to Seneca—is the Vulgate's translation of *λογικός*.

occurrence of such phrases as—"the *cool judgment* of reason," "the dictates of mere reason *being slow and deliberate*," "the *decisions* of reason". This is the sense that the term bears in the Scottish philosophy, when Reason is regarded as a synonym for Common Sense; for Reid informs us (*Works*, p. 425*b*), "judging of things self-evident is the province, and the sole province, of Common Sense". Nevertheless, Hamilton found it necessary to enter a protest. "The term Reason," says he (*ib.*, p. 769*a*), "is of so general and ambiguous an import, that its employment in so determinate a meaning as a synonym of Common Sense ought to be avoided." The advice is unquestionably sound, but the grounds on which it rests are somewhat curious. One might almost suspect a touch of irony in the expression "so determinate": for, in Note A alone, Hamilton himself employs Common Sense in some half dozen different significations. He applies it to a "doctrine," to a "philosophy," to an "argument". At one time he puts it for "the complement of those cognitions and convictions which we receive from nature"—which he also identifies with the data of consciousness; at another time he represents it as an original source or origin of knowledge—"a fountain of truths intelligible". So determinate, indeed!

Both the above meanings are combined, and a third is added in the definition of Stewart. Reason, according to him, not only distinguishes truth from falsehood, and right from wrong, but also enables us to combine means for the attainment of ends. There can be little question that this third or added element has come to us through the Greek. It is the Greek *λόγος*, in its sense of *ordering* or *arranging*, and is characteristic of the wise man or *σοφός*. But the adaptation of means to ends is a complex, not a simple, affair, and often involves a great many different processes, each of which is indeed rational or intellectual, but neither of which can justly monopolise the name. Thus, it implies (does it not?) a preconceived plan, and, in so far as it does so, is a species of Conception. In so far, again, as it manifests knowledge of the properties of the things used as means and the nature or effect of their action, it is intelligence or understanding. In so far as it signifies forethought or prevision, it is shrewdness or sagacity. It further involves choice or selection, and is thus (in Kantian phraseology) *teleological judgment*: and, when practical or ethical relations are implicated, it is Prudence. The heterogeneousness of Stewart's collection reminds us of Cicero in the *De Officiis* (i., 4): "*homo autem quod rationis est particeps, per quam consequentia cernit, causas rerum videt, earumque progressus, et quasi antecessiones non ignorat, similitudines comparat, et rebus praesentibus adjungit atque annectit futuras: facile totius vitae cursum videt, ad eamque degendam praeparat res necessarias*," etc. Or, it recalls Cousin:—"It is reason which gives us this threefold knowledge [*viz.*, of our own existence, of the external world, and of God] on the same authority with that of the slightest cognition which we possess; reason, the sole faculty of all knowing, the only principle of certainty, the exclusive standard of the True and the False, of good and evil,

which alone can perceive its own mistakes, correct itself when it is deceived, restore itself when in error, call itself to account, and pronounce upon itself the sentence of acquittal or of condemnation" (Henry's transl.).

In the philosophy of Kant (which may be taken as a type of the transcendental), Reason is distinguished from Understanding—and this in a twofold manner. The latter has its Categories or Conceptions, and deals only with the relative and sensible—the particular and contingent: the sphere of the former is the absolute and super-sensible; its objects are Ideas, and the truth attained is necessary and universal—cognitions *a priori*. With Kant, again, Reason is either Theoretical or Practical: and the Practical has reference to the Will—the Will as self-determining and autonomous; or, to express it in English form, it is the faculty of Conscience. The object of the Practical Reason is truth when it has become not only universal or "objective" but also *imperative*: in other words, it is the function of Conscience to deal with the ought, the obligatory, the morally binding, and to issue peremptory orders or commands.

Perhaps the best and least ambiguous application of the word is when it is taken for the whole of the intellectual part of man's nature—that part whose fundamental property is Comparison: and then we have to distinguish it from Feeling, on the one hand, and, on the other hand, from Will. As thus conceived, it is one of the three divisions which in their totality do duty for a definition of Mind; and, if we state it as a faculty, it is the faculty of Thought, Cognition, Intellect. In calling it Thought, however, we must guard against the wide Hegelian sense of that term, and also against the signification attached to it by Descartes. Thought, with Hegel, stands for something objective and unconscious (like the Schopenhauerian Will)—"The inwardness, or, as it were, the kernel of the world" (Wallace, *The Logic of Hegel*, p. xxxviii). But to speak of an "objective" thought in this way, is, obviously, to abuse language: for, although there are indeed "subconscious" mental activities—activities that underlie consciousness and operate beyond its range—we are not at liberty to call them "thoughts". Neither can we so denominate the "stream of tendency" that is in the world, whereby man's plans and purposes are often made to turn out quite differently from what he himself anticipated or intended. Even when this stream of tendency is a "power that makes for righteousness," if it be unconscious and impersonal, it is not in any proper sense Thought; whereas if it be personal and conscious, it had better go by the theistic name of an overruling Providence.

It is only another aspect of the same abuse when Hegelians say (see Principal Caird's *Introduction to the Philosophy of Religion*, *passim*)—"Reason is the form of an infinite content". Perhaps, logically regarded, this is rather a statement respecting Reason than a definition of it; but, be the proposition verbal or real, it is liable to the foregoing objection—it cannot be truly affirmed of the psychologist's Reason. Moreover, the description seems a contradiction in terms.

The word "form," even in its most attenuated sense, means *limitation*: and a limited unlimited is, to say the least of it, paradoxical.

In like manner, Reason is not identical with Thought as used in the broad Cartesian sense of Mind. "A thinking being," says Descartes (*Meditation* ii., Veitch's transl.), "is a thing that doubts, understands, [conceives], affirms, denies, wills, refuses, that imagines also, and perceives": and, in *Meditation* iii., he regards as thoughts, not only ideas (representations, "images of things"), but also "volitions, affections, and judgments".

Well then, the fundamental property of Reason, as we have said, is Comparison—otherwise denominated Difference and Agreement. But there is a rational element also in Feeling and in Will, and discrimination is the universal condition of consciousness. How then shall we distinguish Reason (Thought, Cognition, Intellect), from Will and Feeling? Thus. The characteristics of Feeling are pain and pleasure: in other words, a mental fact, in so far as it is pleasurable or painful, is regarded as a feeling. Activity, on the other hand, is the essence of Will: our determinations and volitions have always a reference to action—ethically viewed, they affect conduct, they point to practice. Reason is different from both, though not of course independent of either; and the functions of Intellect are sufficiently evident when marked off from those of the other two. Each department has its own sphere, and each is connected with its own special sciences. The sciences that attach themselves to Will are mainly Ethics and Politics. Metaphysics (including Ontology) and Psychology are the eminently theoretical or rational sciences. The science of *Æsthetics* belongs to Feeling.

Of Reason, regarded thus as a synonym for Intellect, there is a variety of modes or manifestations, and not unfrequently the generic name is applied to one or other of these; thereby creating no small confusion. This necessitates recourse to the second of our defining methods—that which deals with subtle differences or shades of meaning.

II. The first of the allied terms is Reflection: but the chief meanings of this word have been already given (see MIND XXIV., p. 557), and so we shall content ourselves with a simple reference here. The only further signification that needs to be noted is that of contemplation or meditation—where the idea of pensiveness is prominent, and in which the mind is in great measure passive and quiescent.

Reasoning and Judgment come next. Both these processes agree in being discursive; but, while Judgment is the comparison of objects and the affirming or denying of some relation between them, Reasoning (ratio-cinatio, λογισμός, τὸ λογιστικόν) deals with judgments themselves, and from given judgments draws the fitting conclusion. There is indeed a sense in which judgment is properly and strictly reasoning; viz., when it is not confined to the simple affirming or denying of some relation between two things compared (the function of the copula of the logical proposition), but when it stands for a decision or

determination of the mind consequent on deliberation, argumentation, weighing of evidence. In this signification, the fact is sometimes best expressed by such terms as—decision, opinion, belief; and often, it is more proper to say *we pass a judgment*, than simply *we judge*.¹ There is, further, a *psychological* application when the simple understanding or comprehension of a statement (no assent or dissent being involved) is said to be a judgment: in which case “a judgment is possible even when *the two terms are contradictory*,” as in the proposition “a circle is a square”.

Again, Reason is not unfrequently distinguished from Experience. This is quite common in the writings of Hume, and it pervades English literature in general. Reason here stands for deduction, theorising, *a priori* reasoning; while Experience is *a posteriori*, and is regarded as confirmatory and supplementary. Compare, in this connexion, the Butlerian expressions—“the reason of the thing” and “the nature of the case”.

Once more, Reason is sometimes set forth as the special attribute of man, *i.e.*, when man is brought into comparison with the lower animals. But, until there is something like unanimity among authorities as to its meaning in this special contrast, we need not trouble ourselves much about it. Some will have it to be the power of adjusting means to ends—and this in the face of the known characteristics of the spider, the ant, the bee, and the beaver, to which we may add the foraminifer with its complicated shell of exquisite beauty and mathematical construction. Others, like Locke, lay stress upon Abstraction; others, on Speech or the λόγος προφορικός; others still, on Consciousness or Self-Consciousness²; and Prof. Max Müller has lately, in his *Hibbert Lectures*, emphasised the Religious faculty—a faculty that, according to him, is distinct from both Sense and Reason, which enables us to “apprehend the infinite,” and which, while the property of all men, is peculiar to man. Over against this have to be placed the results of recent anthropological investigations, and the tendency of modern speculation resting on an inductive and scientific basis—a tendency which is all in the direction pointed in the *De Natura Deorum* (III. 9), where there are ascribed to the ant, “non modo sensus, sed etiam mens, ratio, memoria”. Any way, the meaning is in the highest degree shifty and uncertain, and is more suitable for rhetorical purposes than conducive to precise thinking.

¹ Bailey, in his *Letters on the Philosophy of the Human Mind*, 1st series, pp. 79-81, proposes to restrict the term to one species of the belief that results from evidence. “So limited,” he says, “it would express the effect of evidence on the mind, or an inference in contingent [probable] reasoning; but it might with great advantage be separated from these synonyms, and appropriated chiefly if not exclusively to signify a particular class of conclusions, namely, those formed from *conflicting* evidence—the principal function of our courts of law.”

² This is Ferrier’s meaning when he says (*Lectures and Remains*, II., 108), that Instinct is “unconscious reason”; for consciousness with him means the notion of personality or reference to self.

III. It still remains to apply the Method of Contrast.

1. The first great antithesis is between Reason and Sense. In expressing it, we have a choice of alternatives. We may call it the contrast of the universal and the particular, or of the one and the many, or of the permanent and the fleeting. But whatever mode of expression we adopt, the thing intended is always one and the same, *viz.*, that it is the province of Reason to compare, abstract, and generalise; to mark agreements and differences, and to see the common in the manifold.

More than this, however, has sometimes been claimed. It has been said, for instance, that Reason is "the power which judges of the perceptions of the senses and contradicts their decisions". To which, it is sufficient to reply, that the senses do not *decide*; and what is contradicted (where contradiction there is) is the false inference or inferences so apt to be drawn from sense-impressions—as, *e.g.*, respecting the actual size of a distant object, or respecting the apparent movements of the heavens relatively to the earth. Reasoning and Reason are here confounded, and the part played by Experience, in the cases referred to, is ignored.

Again, it is said (Price, *Review of the Principal Questions in Morals*, Chap. i.) "the eye of sense is blunt. The conceptions of the imagination ["a faculty nearly allied to sense"] are rude and gross, falling *infinitely* short of that certainty, accuracy, universality, and clearness, which belong to *intellectual discernment*". Stript of the rhetorical and exaggerated language, this means that Intuition needs to be supplemented by other mental operations before we can have the highest degree of certainty and clearness, and that the universal is pre-eminently a product of the Reason. But if it is intended to signify, further, that the senses are originally arbitrary and deceptive, that is a Platonic error not to be countenanced; and the very writer, from whom the above sentence is extracted, can himself admit as much when it serves his purpose. For, farther on in the *Review*, we find him asserting that Intuition and Deduction are "found in various degrees—sometimes clear and perfect, and sometimes faint and obscure"; and, in Note E of the Appendix, when speaking of the external world, he gives utterance to this—"whatever difficulties may attend this subject, it is certain that the evidence of *sense* (like that of *memory*) will always maintain its authority".

Again, we are sometimes informed that sense is only a capacity, Reason is essentially active; or, put otherwise, that "sense consists in the obtruding of certain impressions upon us independently of our wills; but it cannot perceive what they are, or whence they are derived". This, so far as true, is only another way of expressing the characteristic already adduced; and, so far as it goes beyond this, it is not correct. "Independence of the will" is not a fact absolutely distinctive of Sense; for Reason too, in so far as it is the recognition of agreement or difference among objects, is equally independent; and if (for instance) on opening our eyes we cannot prevent the picture of an object being formed on the retina and the consequent sensation, no

more can we avoid perceiving the difference between—say, two different sensations or two different ideas, when once they come within the field of consciousness, or when our attention is aroused.

Reason, then, deals with the general, the universal; Sense with the individual and particular: and herein lies the whole point of the contrast.

2. A second antithesis is between Reason and Passion. This, however, need not detain us, as it is simply the contrast of the impulsive and the controlling powers of our being: the precipitate, the impassioned, the perturbed (*ὁρμη*), on the one hand—and, on the other hand, the calm, the deliberate, the dispassionate, the regulative, the restraining (*ὁρθὸς λόγος, τὸ ἡγεμονικόν*, ratio recta). Cicero calls it—Thought and Appetite; and in the *De Officiis* (i., 36), he expresses it thus:—"Motus autem animorum duplices sunt; alteri cogitationis, alteri appetitus. Cogitatio in vero exquirendo maxime versatur: appetitus impellit ad agendum. Curandum est igitur, ut cogitatione ad res quam optimas utamur: appetitum rationi obediētem præbeamus."

3. Reason and Instinct give us the third opposition: the meaning of which depends in great measure on what we understand by Instinct.

In the first place, there is a very wide sense of the word, in which it is extended to living beings in general—to plants as well as to animals; and then it is said that instinct is nothing more or nothing higher, even in man, than that unerring action whereby a seed, if cast into the ground with the budding end downwards, invariably curves round as it grows so as to assume the upward direction and reach the air and light; whereas the root-end, if pointed upwards, as invariably curves round in the opposite direction, retreating from the light and embedding itself in the earth and darkness. But this meaning is, obviously, impracticable for psychological purposes, and, before we can get a workable psychological conception, we need to narrow considerably. A narrower signification, accordingly, is found—say, in Dugald Stewart. Stewart divides principles of action into two classes—the Instinctive and the Rational; and, under the former, he includes Appetites, Desires, Affections, and, under the latter, Self-love and Benevolence or Conscience. This too seems to be Butler's division; for, again and again in the *Sermons*, he groups Appetites, Passions (= Stewart's Desires), and Affections on one side, and on the other—"Reasonable Self-love and Conscience".¹ But even this is too wide. For there is clearly no propriety in calling the Desires instincts, much less in applying that name to the Affections (Emotions). With equal justice might we call Reason itself an instinct, or speak of an instinctive will. That there is an instinctive element in one and all of these,

¹ It is observable that, notwithstanding Butler's vigorous protest against making benevolence the sum of virtue, he frequently identifies conscience (as above) with the principle of benevolence; and, in one place in the *Sermons*, he calls the object of self-love "happiness," and that of benevolence "virtue".

is quite true—something constitutional on which they repose ; but so much the greater need, on that account, of precision and exactness in marking the characteristic differences, and in carefully avoiding a confused classification.

What then, shall we say, characterises an Instinct—so that we may sufficiently mark it off from other things nearly akin, yet different ? Dr. Bain says, “Instinct is untaught ability” (*Mental and Moral Science*, Bk. I., c. IV.) ; more fully (*Senses and Intellect*, 3rd edition, p. 246) “the *untaught* ability to perform actions of all kinds, and more especially such as are necessary or useful to the animal”—the name “for what is primitive or primordial on the active side of our nature”. And this, no doubt, is true ; but scarcely the whole truth. Hamilton defines (*Reid's Works*, p. 761a)—“an Instinct is an agent which performs blindly and ignorantly a work of intelligence and knowledge”. The word “agent” is peculiar here ; but we may understand by it what Dr. Bain designates above “the active side of our nature,” and then it has intelligible meaning : and the addition of “blind and ignorant performance” is indeed important ; for a leading trait of instincts is that they are marked by the absence of conscious purpose (not necessarily of consciousness), so far as the individual is concerned. But is there not a third element that ought to be included, and has not Paley rightly characterised it in the word “propensity” ? “An instinct,” says he (*Natural Theology*, ch. xviii., “is a propensity prior to experience, and independent of instruction”. If so, then the three defining features are—untaught ability, untaught propensity, unconscious purpose ;¹ by these is Instinct distinguished from its nearest ally Habit, and by these is it demarcated from Reason. Habit is the product of tuition and experience ; and, although when fixed and formed it carries along with it a propensity to act, still this propensity is not untaught ; and although it is of the nature of a habit to grow mechanical, it may nevertheless be questioned whether any habit, formed within the experience of the individual, is ever so mechanical as that it cannot to a certain extent be brought within the individual's conscious control. Thus is habit psychologically distinct from instinct : and the distinction would remain for the individual even were it proved, with Lewes (*Problems of Life and Mind*, I, 141), that instinct is “*lapsed or undiscursive Intelligence*—the fixed action of an acquired organisation, transmitted from ancestors who acquired it through Adaptation, whereby what was facultative became fixed, what was voluntary became involuntary”.

But Instinct, by the three foregoing characteristics, is also sufficiently marked off from Reason. It is opposed to Reason when we take this last word in the sense of Reasoning ; for in instinctive action there is neither deliberation nor inference. But it is further opposed to it when we accept Reason as the equivalent of Thought,

¹ Others are sometimes added—such as, unconsciousness, involuntariness, unerringness : but not one of them is thoroughgoing. See Darwin, *Origin of Species*, ch. viii.

Cognition, Intellect. Being a primordial propensity, Instinct is not based upon comparison, but operates spontaneously and instantaneously; and being confined, for the most part, to the *active* side of our nature, it allies itself with Volition, rather than with Reason, or with any other mental operation whatever.

Another meaning, however, is sometimes given to the contrast—to the contrast, I mean, between Reason and Instinct. The one, it is said, is the higher, and the other the lower; and moral worth attaches to the first and not to the second. Frequently we hear it said—"the virtue of an agent is always *less* in proportion to the degree in which natural temper and propensities fall in with his actions, instinctive principles operate, and rational reflection on what is right to be done is wanting". There is, no doubt, truth in this. Virtue is essentially moral strength, and presupposes the antagonism of different forces in our nature. It could have no meaning apart from temptation on the one hand, and resistance on the other. It is heroic action; and because it *costs* us something, because it demands effort and a sacrifice on our part, we admire and praise it. Hence we say, it is higher than action that is simply impulsive or instinctive. But the antithesis, as thus interpreted, is valuable only in Ethics. It is ethical truth which we dare not ignore, which is accepted alike by Intuitionists and their opponents; though how far it is compatible with the theory of an *instinctive* moral sense, or moral faculty, is a different question.

4. The fourth and last antithesis is between Reason and Faith; but it scarcely concerns us here. So far as faith is a lazy docile acquiescence in what comes to us stamped with authority—so far as it arises from mental indolence or from unwillingness to think, investigate, and prove—so far as it is a blind or unintelligent adherence to a master's *ipse dixit*—it is essentially antiphilosophical. Doubt, since the days of Descartes, has been acknowledged to be the beginning of philosophy; or rather, let us say, it is the first fruit of an awakened and rational curiosity. When, on the other hand, Faith stands for humble acceptance of truths that lie beyond the grasp of human Reason—truths vouched for by Divine revelation, it is a religious quality, and the consideration of it belongs strictly to Theology.

WILLIAM L. DAVIDSON.

THE ACTION OF SO-CALLED MOTIVES.

MR. SETH in his *Development from Kant to Hegel* (reviewed in MIND XXVII.), after remarking against Kant's theory of 'intelligible freedom' that "in separating the *man* from his 'character'—intelligible or phenomenal—an unwarrantable abstraction is involved," goes on (p. 105 n.) to say—

"Kant seems to be in quest of the phantasmal freedom which is supposed to consist in the absence of determination by motives. The error of the Determinists from which this idea is the recoil, involves an equal

abstraction of the man from his thoughts, and interprets the relation between the two as an instance of the mechanical causality which exists between two things in nature. The point to be grasped in the controversy is that a man and his motives are one, and that, consequently, he is in every instance self-determined."

A somewhat similar view as regards (at least the language of) Determinism was expressed by me, some nine or ten years ago, in a short unpublished paper read (as a text for discussion) before the now defunct Metaphysical Society; and as the position there taken up seems to me still worth insisting on, whether as regards the special question or in the more general reference opened out at the close, I will venture to submit to the readers of *MIND* the paper in its original form (though if I were writing now I would alter some expressions).¹ It ran as follows:—

When a man wills, it is common to say that he acts under some motive or motives. The expression, like other popular sayings about mind, has an objective or materialistic implication. As one ball may be motive, or the motor, of another, so a man is supposed to be put in motion, or determined to act, by something other than himself. Not that even in the common apprehension a distinction is not made between the moving of a man and the moving of a ball: a man is often seen to act, as it is said, of himself or of his own motion; when there is a motive supplied from without, this need not be a thing thought of as in any way moved; and any such motive is plainly seen to have its effect conditioned by the nature of a man in a fashion to which the inertia of a ball furnishes only the faintest analogy. But yet the general analogy is understood to hold, and very many cases of human volition admit of being described according to it well enough for all practical purposes. It provides a kind of reason for the uniformity and constancy which men find, and are most interested to find, in the acts of their fellows. The variety and inconstancy also found, people deal with in practice as they best can, and do not pretend to explain.

The expression, however, has farther been drawn into the scientific or philosophic theory of will, being assumed alike by the determinist and the indeterminist for their opposite readings of the psychological process of volition. These theorists have in dispute between them what seems a strictly philosophical issue, and the only one involved in the secular question as to free-will. The determinist, or, to use Priestley's word, the necessarian, declares that volition is always wholly determined by motives,—that in some motive or motives the sufficient reason, or efficient cause, of every voluntary act is contained. On the other hand, the indeterminist contends that there is also the ego or will itself to be reckoned with; the ego may pass into action without motive, and with motives present is always called, if proceeding rationally, to decide which among the motives should be yielded to. The consciousness of such a power of self-determination, either absolute or with reference to some particular motive which thus acquires an efficacy not its own, is the point perhaps most strongly urged by the indeterminist. It is replied by the other that the rational

¹ In one or two sentences of the last paragraph but one, the thought resembles that to which Mr. Spencer had already given expression in the *Principles of Psychology* (I. § 219), published a year or two before, but I was not aware of this at the time.

choice or supposed self-determination is only the coming into play of some other motive.

Looking at the two theories from without, I cannot but think that the determinist, with his causation by motives, fails to take due account of the subject that is determined. Call motive to a particular action some present or represented feeling which the action will in the one case sustain or in the other bring on, and, in yielding to the motive or in its determining to the act, what is that which yields or is determined? Whether named subject, mind, ego, or will, it must be supposed something with a nature of its own, through which it will co-operate with the motive towards the resulting act; and this doubtless is what the indeterminist has in view, when he urges his counter-theory. But is the counter-theory, as it is expressed, less open to criticism? Hardly; for the terms employed to express the relation between the feeling and the act are in truth equally applicable to that which comes of the co-operation of the mind or ego. If the feeling is in any strict sense a motive to the act, the so-called rational determination, through which, let us suppose, the feeling is overcome and the particular act is deliberately repressed, can perfectly well be ascribed to the intervention of other motives. The determination, being rational, has its grounds; nor would it be without motive, even though it sprang from mere caprice. This a clear-headed thinker like Hamilton, himself no necessarian, is not only constrained to allow, but forward to assert against such an advocate for free-will, not clear-headed, as Reid, and accordingly he finds the moral liberty of the indeterminist wholly inconceivable. It is true that nevertheless he is able for himself to accept it as a fact upon the direct testimony of consciousness.

From the presence of such difficulty in each of the theories it would be wrong to infer that their antagonism is more apparent than real—more real and profound it could not be; but we may suspect that for one or for the other the difficulty arises from a defect in the language employed by both, and with a different statement would vanish. Such defect appears to lie in the word "motive," which may have a serviceable application in the popular view of man and the world, but has no scientific, which is to say here psychological, value whatever. In the common apprehension, a man is an object among objects, acted upon by and reacting upon them, and only irregularly or vaguely is any account taken of the subjective conditions under which the reaction, when voluntary, takes place. Language, as begotten of common needs, follows suit, and consistently enough, at least for practice, speaks of a man as acting under motives, or of motives as influencing a man. Very naturally, then, when there is a beginning made of psychology, and mental states as such have to be considered, is the popular expression diverted from its original and proper reference to man as a physical object, and employed with a reference to mind, or still more specially to will, as if the mental states had a separate subsistence therefrom. But however natural, surely this is a most improper transference. In no strict sense can the feeling to sustain or bring on which an act is performed, be called a motive to that act as a psychological state. The feeling and the willing of the act are two successive moments in consciousness, and that seems the whole psychological statement of the case. Or, to be more particular, if the act is willed directly upon the feeling (present or represented) being had, that can only mean that a representation of action associated with the feeling becomes actualised, or passes into action present. If, on the other hand, it happens that, in spite of the feeling, the act is not willed, but either it is willed that the act be not done, or something else is willed, or there arises a state of mental suspense,—that can only mean that some other feelings and ideas have supervened in

consciousness, and have acted themselves out or not, as the case may be. But from this point of view there is no more any question of an ego to be reckoned with for explanation of the volition. No doubt reference to a mind, ego or will, apart from the particular conscious states, is still possible, and not only possible, but under the conditions of language inevitable, for conscious state must be held to imply something of which it is the state, as much as motive implies something that is moved. Here, however, the reference is one of mere expression, which leaves the psychological explanation unaffected. While the correlate of a motive is truly a distinct thing objectively, to be separately allowed for, it is quite otherwise with the ego or mind, and *a fortiori* the will, spoken of as the subject of particular conscious states. A feeling which is a state of the ego, is the ego in a certain state, and not less the ego because the state at the particular moment might conceivably have been a different one, and does, in fact, the next moment give place to one that is different. Or, if a conscious state is not that, what is it? Now, with no ego left that can modify the succession of states as they emerge, to discover the psychological law of the succession is to give all the explanation that is possible of volition. The matter would then stand thus:—If so-called motives are not understood as definite mental states, they are of no account for the psychological explanation of will, and any theory of their action, deterministic or indeterministic, is unphilosophical. If they are so understood, they should in psychology be so expressed, and the theory of indeterminism, or more properly the doctrine of free-will, becomes untenable. It is tenable only if an ego can be found which is not an ego already determinate; but such an ego, though it may be logically distinguished and verbally expressed, is not a real factor in psychology.

The argument has this moral: that, if mental philosophy must use a language devised for purposes other than philosophical, it cannot be too careful about the inferences it founds upon the words. Even the objective sciences, as they advance, drift farther and farther away from the use of popular expressions, and beget a technical language of their own. Psychology only, though as subjective science it can least of all be served by common speech, developed as that has been with an almost exclusively objective regard, tries to work without such technical aid. This is not surprising, because, if it were sought to devise an appropriate and perfectly consistent language for the results of psychological analysis, it would differ so profoundly from common speech as to be unintelligible, even in its principle, to all but adepts; whereas in other sciences, however abstract, at least the principle is perfectly intelligible to people in general, and in most of them the difference is only one of greater constancy and precision in the use of the verbal or written signs employed. But the consequence is that, while popular conceptions and misconceptions do not gain a footing in the objective sciences or can be easily extruded if they do, mental philosophy has always been more or less tinctured by an admixture of popular opinion, not rendered more philosophic by being refined upon. There have been writers of no small repute who never could place themselves at the philosophical point of view, and there are no thinkers who, when it comes to expression, do not find it difficult or even impossible to maintain consistently the philosophical attitude. With language what it is, this must always remain so; but the greater is the need to signalise the difficulty and the danger.

EDITOR.

DR. C. VIGUIER ON "SENSE OF DIRECTION".

AN important article "On the Sense of Orientation and its Organs in Man and Animals," in the July number of the *Revue Philosophique* (pp. 1-36),¹ by Dr. C. Viguier, writing from Algiers, advances a subject which was previously noticed in *MIND*, on occasion of M. Cyon's thesis on the functions of the Semicircular Canals (XII. 559) and otherwise. Dr. Viguier gives first a remarkably careful review of the different suppositions that have been put forward to account for the well-attested feats of dogs and other animals, also of human beings chiefly savage, in finding their way back to particular spots; and then expounds his own view (formed independently but anticipated in general terms by one or two anonymous writers) that the only adequate explanation is to be found in the hypothesis of a special mode of unconscious sensation excited by the earth's magnetic currents. In particular he seeks to show (against the general objections urged by Darwin and another writer in *Nature*) how such a mode of sensibility might supply all the data necessary for determining direction. Still further he aims at giving scientific definiteness to the hypothesis by contending that in the semicircular canals, as investigated after others by Cyon and later by Spamer (*Pflüger's Archiv*, 1880, p. 585), the precise kind of specialised organ that ought to be assignable in the case is supplied. No attempt is here made to give the steps of his argument towards this conclusion, but it is one deserving of all attention. The article closes with an indication of the kind of experiments which, in Dr. Viguier's view, might be carried out upon pigeons (though these are not remarkable for special "sense of direction") and other animals, for verification or rejection of the hypothesis. He has been forced to publish his research in the tentative form, from want of means to carry out the experiments by himself. Among his other suggestions, he calls for experiments on deaf-mutes; apparently not knowing that Prof. Wm. James (as noted in *MIND* XXIII., 412) is already at work on this line.

EDITOR.

¹ The article has since been printed also separately (Paris, Germer Baillière).

VI.—CRITICAL NOTICES.

The Science of Ethics. By LESLIE STEPHEN. London: Smith, Elder & Co., 1882. Pp. xxviii., 462.

Mr. Stephen's book is an elaborate and important—though not, in my opinion, a thoroughly successful—attempt to “lay down an ethical doctrine in harmony with the doctrine of evolution”. Its merits and defects combine to render it a difficult book to review: as its chief merit appears to me to be its sustained vigorous thoughtfulness, its abundance of pertinent and pointed observations and reflections, to which it is impossible to do justice within the limits of a notice: while on the other hand I find it wanting in clearness of method and systematic arrangement, both as regards the conduct of particular arguments and the organisation of the whole set of discussions which it contains. These discussions are of three kinds: one portion of them belongs to subjective psychology, being concerned with an analysis—from the individual's point of view and mainly introspective—of the kind of consciousness that precedes and determines volition; another part is occupied with the development of positive morality regarded as a property of the social organism, and here the procedure is sociological observation and induction, aided largely by the deductive application of the Darwinian theory; while again the treatise also seems to aim at a result strictly ethical (in the narrower sense), at the systematic determination of an ideal code of morality. But what precisely the method of reasoning is by which this third result is attained, I find it difficult to say; especially since the treatment of this subject is made to run rather confusingly through the parts of the other discussions, like a thread of logically alien texture. Again, there seems a certain awkwardness in the arrangement by which (as we shall see) the sociological part of the treatise is interpolated between two discussions that belong to subjective psychology; and the ascertainment and analysis of the facts of the ordinary moral consciousness as at present existing are hardly enough distinguished from the history—necessarily somewhat hypothetical—of the manner in which it has been developed.

These sources of confusion and perplexity I will try to indicate more fully as I proceed; they do not, I think, detract materially from the interest of the work.

Mr. Stephen's problem, as he originally states it, is “to discover the scientific form of morality . . . the general characteristic, so far as science can grasp it, of the moral sentiments” . . . the part they “play in the general system of human society”. He begins by an account of human motives generally, considered from the subjective point of view. All human conduct is determined by feelings; and this, according to Mr. Stephen, is equivalent to saying that it is determined by pleasure and pain. The ethical importance of this

proposition is, however, less than at first appears : since Mr. Stephen does not mean that when a man chooses between two alternatives of conduct the consequences of the course that he chooses are always represented at the moment of choice as more pleasant or less painful than the consequences of the course that he rejects. "No feeling can affect us except so far as it is felt"; that "the estimate of future pleasure does not always produce a corresponding pleasure . . . will be admitted on all hands"; and we find later on that the pleasures and pains of others are liable to affect us so much as to lead us to sacrifice knowingly our own happiness to theirs. Still, it is affirmed that "the will is always determined by the actual painfulness or pleasantness of the choice at the moment of choosing"; or, in a different phrase, "by the simple process of feeling one course to be the easiest," according to "the principle of least resistance".

I cannot accept this account; and the criticism that I shall make on it illustrates what Mr. Stephen elsewhere says of the lack of agreement on elementary points in psychology. In my view, the feelings that normally cause action are not pleasures and pains as such, but desires and aversions, which may be very strong without being definitely either pleasurable or painful; while, again, the desire of an intense pleasure may be a painful feeling, and the aversion to formidable pains, if not distinctly recognisable as itself a pleasure, is at any rate sometimes an indispensable element of a consciousness on the whole pleasurable—as in enterprises of which the charm depends upon their danger. It further appears to me that, while the satisfaction of a desire is always a pleasure, this pleasure is not necessarily or even normally the result which the desire moves the will to aim at; and that we often desire results which are not conceived as the pleasures (or relief from pains) either of ourselves or other sentient beings. In particular, the aversion normally accompanying the moral judgment that an act is wrong is not, in the main, aversion to the foreseen pain of remorse; nor is it, in many cases at least, aversion to the painful consequences of the wrong act to others;—aversion (*e.g.*) to untruth or injustice is often felt when the consequences of the act contemplated appear on the whole desirable. Mr. Stephen, as I understand him, is concerned to maintain that such moral judgments cannot, any more than any other operation of the intellect, move the will, apart from emotion. This seems to me rather a subtle psychological question; but at any rate I should say that in the case of moral judgments I am frequently not conscious of any emotion other than what is implied in the mere consciousness that the judgment carries with it a motive. And it is, I suppose, this consciousness, in cases where we feel some powerful emotion prompting in an opposite direction, that has led to the phrase "conflict of reason with passion" to which Mr. Stephen objects. In his view, what is called the government of passion by reason is simply the effect of represented [non-rational] emotion, or symbols of emotion operative through habit and association—"latent emotion" being converted into actual so far as is needed for the resistance of passion. Intellectual development

of course influences emotion so far as it is accompanied by the development of new sensibilities; and influences volition so far as it leads to the more accurate representation of facts—including among facts the agent's future feelings: in this way it tends to reduce vagaries and caprices and give continuity and consistency to the conduct. Though, as Mr. Stephen subtly argues, the condition of logical consistency does not strictly enable us to condemn any feeling as unreasonable: since "there is always some cause for the wildest vagary or the most unreasonable prejudice," and "to give a merely formal consistency to my conduct it is sufficient that this cause should become a reason"; still, the development of reason does tend to bring about a certain harmony of action: "for, instead of allowing each impulse to operate exclusively in turn, it subjects each to the implicit and explicit control of the others". But "we may still ask, how is the relation between the different instincts determined? what settles the influence exerted by each member?" to which the only answer that he can give, from the point of view of subjective psychology, is that it will be settled by the balance of instincts which constitutes at the time the character of the individual; "we have so far no means of saying why one character should not be just as reasonable as another".

In all this Mr. Stephen seems to me, first, to ignore the psychological phenomenon of divergence which the play of represented and actual feelings continually causes between the resulting *judgment* as to what is right or best to do, and the resulting action,—the "*video meliora proboque deteriora sequor*". This is surely too important a fact to be overlooked in discussing the relation of reason and feeling even from a purely psychological point of view. And, secondly, his conclusion here seems to be inconsistent with what he afterwards says (c. vi., p. 254) as to the "only assignable rule of conduct"—sympathy apart—"prescribing action for a maximum of happiness": since it follows that when we find the balance of instincts in any individual leading to misery, and in another to happiness, the reason cannot but prefer the latter character. In short, I can see no good reason why the psychological discussion should be thus broken off here and taken up again in c. vi.: the transition effected to the sociological point of view, and the comparison of types of character by the standard of conduciveness to social wellbeing, appears to me sudden and forced.

However, let us pass to the sociological discussion. Here, as has been said, the general assumption is that natural selection tends to produce, in human character as in other departments of life, the type of maximum efficiency for life under given conditions: but the application of this principle to the particular case of human character is very carefully conducted, and forms, I think, the most interesting part of the treatise. We note first that evolution—in the case of man—is concerned with the vitality not of single individuals, as such, but of a class of beings that have to be continually reproduced and exist only in more or less organised societies. We may therefore distinguish, as susceptible of improvement by evolution, qualities tending to preserve (1) the individual, (2) the race, and (3) the organised community;

recognising that all are required and that any improvement in (1) accompanied by greater deterioration in (2) or (3) would not really be useful to the kind, and would not therefore be produced by natural selection. *Ceteris paribus*, any improvements in the efficiency of living individuals are of course useful to the kind, so far as they tend to be transmitted through physical propagation, and to the community, which is an aggregate of individuals though not a mere aggregate. But what we are specially concerned to observe is the important class of qualities which are not possessed by the individual through physical inheritance, requiring only interaction with his material environment for their development, but are acquired after birth through social intercourse.

To this class belong knowledge and all that is implied in language, skills and arts of all kinds, and, in particular, a moral code. An account of the changes that take place in these qualities gives us the life of human society as such: and history shows these changes to be vast, while the constitution of human individuals, as born, remains approximately constant: one of these changes being the growth of a recognised and formulated moral law. (Mr. Stephen, I think, goes beyond the evidence in assuming the physical similarity of the infants of pre-moral savages with civilised infants, since we know so little of the brains of either; but the point is not of fundamental importance.) We have then to ask how the general course of this social history is determined by the principle of natural selection. Here Mr. Stephen draws attention to a difficulty often overlooked in this kind of discussion. Man—at least civilised man—is not a member of one community but of many: we usually think of his “social organism” as a state; but members of different states may belong to the same industrial or ecclesiastical organisation, and members of the same state may belong to different clubs, companies, &c., each having its own corporate existence. Now which of these societies is the “unit upon which the process of evolution impinges”? If political communities were so separate in their lives that improvements could not be diffused from the one to the other, the unit of evolutionary improvement would be the nation: but in “any moderately civilised state of the world” this is not the case, as “war is then a comparatively subordinate phenomenon”; even when a conquest takes place, the conquered group is “not extirpated but incorporated”. Hence we must take as the unit in the struggle for existence, which “necessarily implies the supplanting of the weaker by the stronger,” what Mr. Stephen calls the *race*—how he defines it I do not quite understand—which forms what he prefers to call “social tissue”¹ rather than “organism”; since a race is not, as a state is, capable of combined action for a common end. “The unity which we attribute to it consists in this, that every individual is dependent upon his neighbours, and every modification arising in one part is capable of being propa-

¹ The relation of “race” and “tissue” seems, however, rather vaguely conceived; as Mr. Stephen afterwards speaks of different races as having identical tissue.

gated directly in every other part"; the organisation of such a tissue into different states not destroying its continuity. The effect of the competition for existence is of a mixed and complicated kind; it partly consists in different degrees of success in efforts to survive under material conditions without direct mutual struggle; so far as the latter comes in, it is no doubt possible that a large political community of inferior tissue may extirpate a superior though smaller nation; but, generally speaking, the "tendency is to the predominance of races having intrinsically the strongest tissue". We have then in considering the properties of social man to distinguish three kinds: (1) those he would equally have, if he had been transported as an infant into a different society; (2) those he has as a member of a certain social tissue; and (3) those he has as a member of a state or other special organ of human society. And since the dissolution of the states does not involve the destruction of the individuals composing them, we must take the social tissue as the "primary unit upon which the process of evolution impinges": we must understand the social evolution, which has produced among other things an explicit moral code, to mean the evolution of a strong social tissue.

What, then, is the exact place of morality in this process? When we speak of morality as a Law or Code, we mean that there are certain "organic customs" essential or useful to the society; which would not exist unless the mature members of the society generally had developed instincts of conformity to them, but which we may call a 'law' relatively to any particular individual, meaning that he is under "a pressure tending to enforce a correspondence between his actions or feelings and those of his neighbours"—the sanction of this law being "whatever consequences other than the legal ones result from imperfect harmony with his social medium". Morality, then, consists of the most important of these customs maintained, and habits or instincts generated, by social pressure in members of any social tissue generally—as distinct from the customs or habits belonging to any particular organ of this tissue. It contains "the essential conditions of the vitality of this tissue"—or rather the *actual* moral law must be "an approximate statement" of such essential conditions. It must be this, because "the process by which society has been developed implies that the most important characteristics developed in the individual by social pressure correspond approximately to the conditions of existence of the society".

Mr. Stephen's main distinctions, in the long analysis that I have briefly summarised, seem to me interesting and valuable in a general way; but I think that they are drawn somewhat too sharply for his special purpose, and, further, that he is hardly aware of the extreme vagueness of the only conclusion attainable by his method. In the first place, I should conjecture that the organisation in political communities must have had more importance than he attaches to it, at least in the earlier part of the evolution that he describes; *e.g.*, I should trace the prominence given to military valour in early estimates of human excellence to the struggle for existence between tribes before

war became a "comparatively subordinate phenomenon". And it is only in this earlier period that I can regard the natural selection of social "tissues" as a really important factor in the development of morality; I do not see, for instance, how any of the important changes that have taken place in the morality of civilised Europe during the last twenty centuries can be properly attributed to this cause. But secondly, accepting "social tissue" as the unit which the struggle for existence tends to improve, I think Mr. Stephen's conclusion that the actual morality of any society represents "approximately" the essential conditions of its existence is only admissible—as a mere deduction from the "evolution theory"—if we take "approximately" in a very loose sense. It might equally well be deduced from the same theory that the individual's organism was "approximately" adapted to its conditions of existence, and therefore that all men were always in approximately good health, with a balance of instincts that could be approximately trusted to lead to health-preserving conduct. And in a certain sense this would be true; but it is in the interval between the "approximation" and perfect adaptation that the whole art of medicine finds its field; and surely the moralist—whom Mr. Stephen afterwards compares to a physician—must be prepared for at least an equal hiatus between the customs actually enforced by praise and blame in any society and the truly "essential conditions of its social existence".

Mr. Stephen proceeds to explain from the same point of view the chief characteristics recognised as belonging to morality generally; and to exhibit the chief branches of duty or virtue—courage, temperance, truth, justice and benevolence—as essential conditions of social existence. The truth of his conclusions, broadly taken, no one is likely to gainsay; nor is he unsuccessful in explaining, in harmony with his general view, certain commonly recognised exceptions to particular rules—such as the rule of veracity. I think, however, that in this part of the treatise the mixture of methods which I before mentioned is a source of confusion: the view of morality at which Mr. Stephen arrives by direct analysis of existing moral sentiments, and effort to reduce them to a clear and consistent system, mingles itself perplexingly with the application of his sociological doctrine to the history of the growth: in consequence of which certain characteristics that explicitly belong only to morality in its latest stage are apparently thrown back into the earlier periods of its development. Thus the distinction between the "prudential" and the "moral" codes is given as though it were necessarily apprehended throughout the whole evolution; whereas it is only found in germ at so late a stage as that of Greek ethical reflection. Again, Mr. Stephen gives as an essential characteristic of morality proper its "internality": "the moral law has to be expressed in the form 'be this,' not in the form 'do this': it prescribes character primarily not conduct". Admitting the vast gain in general effectiveness that is obtained when morality advances from the mere regulation of outward actions to the regulation of feelings or dispositions—I still think Mr. Stephen's statement misleading

even as regards the latest stage of moral development; since there is an important class of virtues, such as (*e.g.*) veracity and justice, which, though I may regard them as qualities of character rather than conduct, I yet cannot definitely conceive except as tendencies to produce certain external effects. At any rate the primary effect of "social pressure" must be to produce outward conformity to the approved type of conduct. And this leads me to say that I desiderate, in this part of the treatise (cc. iv., v.), a more thorough and systematic analysis of the inner causes of moral development, the existence of which is necessarily presupposed in applying the theory of natural selection. It is perhaps from want of this analysis that Mr. Stephen sometimes falls, as I think, into the error of the older utilitarian school, in their historical explanations, of attributing the emergence of new moral approvals or disapprovals to conscious calculations of utility. For instance, the following explanation of asceticism is surely unhistorical: "The growth of a rich and powerful class . . . in which great men plunge themselves into sensuality with indifference to the sufferings of their dependents, suggests the doctrine that sensuality is the great enemy of mankind. . . . The best teachers see that the passions are strong enough to take care of themselves . . . and therefore they denounce [sensuality] unsparingly without supplying those qualifications which will be sufficiently supplied by the facts." Surely this calculated overcharging of the condemnation of sensuality is utterly alien to the temper of such men as those who, in any age or country, have led mankind in the direction of asceticism!

In the three following chapters (vi.-viii.) the psychological discussion of motives is taken up afresh. Taking the individual man now as a member of a society having a moral code, and taking morality, as distinct from prudence, to prescribe a character tending to act for the good of others, we have yet to ask (1) "what is the quality in respect of which the individual is susceptible to the social pressure, (2) what is the form taken by that pressure, and (3) what is the nature of the character that must be impressed on the individual". In answering the first of these questions, Mr. Stephen seems to me to ignore unduly the part played by what Mr. Spencer aptly distinguishes as the "ego-altruistic" sentiments, the fear of the disapprobation of one's fellows and pleasure in their approval: probably because he does not consider the external conformity produced by these feelings as properly deserving the name of morality. True "morality, taken as implying the existence of certain desires which have for their immediate objects the happiness of others," can only find a basis in distinctly altruistic sentiments: that is, in the sympathy by which an individual derives pleasure or pain from the mere representation of the pleasures and pains of others. Mr. Stephen draws attention to the necessary implication of sympathy in cognitive processes generally; knowledge even of a non-sentient object involves an implicit recognition of other consciousnesses to which it is objective, while knowledge of anything sentient more obviously includes representation of its feelings. But in saying that the "pain due to the pain of others is a direct and

necessary result of the very process of thinking about others" Mr. Stephen surely goes too far; since, as he himself recognises, if we think about others in a malevolent mood, we derive pleasure—up to a certain point—from a vivid representation of their pains; and, apart from malevolence, men often gain a purely pleasing excitement from the narrative of others' sufferings, and still more often cognise pain as an external fact without any perceptible emotion. Still it must be admitted that the intellectual representation of the feelings of others normally tends, if vivid, to be accompanied by some emotional sympathy with them: and therefore that conduct to a certain extent "altruistic"—promotive of the happiness of others—is natural on the part of such a being as man. But I am unable to follow the transition by which Mr. Stephen proceeds to argue that the complete subordination of self-interest to the interest of society is "reasonable"—thus, I may remark, taking up the snapped thread of the earlier chapter on motives. His argument is as follows:—

"To become reasonable . . . is to act on general principles, and to act consistently; and this, as I have said, includes the condition that a statement of the real cause of my actions should equally assign the reason for my actions. The law which my feelings actually follow must coincide with the principle which commends itself to my reason. In order, then, that a being provided with social instincts should act reasonably, it is necessary, not that he should take the course of conduct which gives the greatest chance of happiness [to himself], but that which gives the greatest chance of happiness to the organisation of which he forms a constituent part."

I have nothing to say against this ethical conclusion; but I cannot see the force of the reasoning by which it is reached. For no one's actions conform perfectly either to the prudential or to the social axiom; and yet, as Mr. Stephen has himself argued, the "real cause" of every one's actions is not therefore less intrinsically capable of being represented as its reason. It may be answered that the actual conduct of civilised man at any rate approximates more closely to the social than to the prudential axiom: but (1) this answer does not justify the inference above given, and (2) I hardly think that Mr. Stephen can consistently make it. He holds that the two axioms approximately coincide in the conduct that they prescribe: and so far as they diverge, so far as individuals have to choose between their own greatest happiness and that of the community, Mr. Stephen will hardly maintain that they actually more often sacrifice the former than the latter.

I return to the explanation of actual morality. Taking sympathy as the element of virtue, we observe, next, that virtue "implies more than simple altruism or benevolence," viz., "the elaboration and regulation of the sympathetic character which takes place through the social factor". Through sympathy we not only seek the happiness of others, but also "catch the contagion of their complex sentiments": this, however, explains how individuals acquire moral sentiments rather than how these arise in a society. "If virtue

were identical with altruism we might identify moral approval with gratitude"; but as it is not, this approval requires explanation. In the explanation, however, that Mr. Stephen offers (in c. vii.) I find it hard to disentangle his exposition and justification of his own notion of merit from his account of the development of the ordinary notion: and yet the two conceptions do not seem to be identical. According to Mr. Stephen, a man "is meritorious, so far as he is so constituted as to obey the moral law unconditionally": but the ordinary notion of merit he defines as "the exchange value set upon virtue"; it varies, therefore, with the supply and demand of the latter, and carries with it a reference to an assumed average standard of "conduct"—there is a zero point of merit below which the moral law would be obeyed even by average persons without extrinsic motives. Again, in Mr. Stephen's view, the desire of others' praise must, I suppose, be classed as an extrinsic motive; but this does not seem to be the ordinary view as expounded by himself, since he expressly says that we only give praise to conduct with the view of stimulating it.

The greater part of this chapter, however, is occupied in clearing away certain fallacies which obscure the conception of merit, being, according to Mr. Stephen, distortions of its proper characteristics. Thus the fact that merit only attaches to actions as exhibiting character—exhibiting that is a disposition to choose actions socially beneficial apart from any extrinsic motive—is distorted into the supposed condition that merit involves free-will in the metaphysical sense; while, again, the relativity of the ordinary standard of merit has led to the erroneous doctrine that merit is proportioned to effort: the true view being that "the man is most meritorious who is virtuous with the least effort, provided always that he has the normal passions of a man". There is much that I should like to say in answer to Mr. Stephen's acute arguments in support of these conclusions; but I must pass to consider the yet more important question as to the nature of the "intrinsic motive for right doing". From Mr. Stephen's view of the essence of morality, it manifestly follows that actions may be virtuous although done without any conscious reference to a moral law; for if an individual enjoys such a balance of instincts as naturally impels him to acts preservative of his social tissue, he will do right, though he may never think of right and wrong as such. Still Mr. Stephen holds that an explicit recognition of the law is "the crown and final outcome of the moralised character"; so long as this is wanting "we are without the full guarantee for a regular observance of the moral law". But he is at the same time concerned to maintain (in c. viii.) that the faculty to which this recognition is commonly referred, under the name of conscience, is not "separate," "elementary," or "primitive". If we admit the gradual development of morality out of a pre-moral state of human existence, it follows that the faculty of moral cognition cannot be, in a historical sense, "primitive": but I can find no significance in the assertions that it is "separate" and "elementary," except so far as they import what seems to me a clear result of reflection—*viz.*, that the notions of right

and wrong, as peculiar to moral cognition, are unique and unanalysable. On the other hand, I should quite agree with Mr. Stephen's statement that "the law is given much more distinctly than the feeling by which it is enforced," understanding it to mean that the cognition or judgment of rightness and wrongness is more distinct than the accompanying emotions: but then it is the cognition especially that I regard as the manifestation of the moral faculty, which in its special application to the agent's own conduct we call conscience. The emotions attending this special application seem to me complex, variable, and difficult to analyse exhaustively. The sense of shame, to which Mr. Stephen calls attention, is doubtless one element of the emotions that generally attends a condemnatory judgment; but it is not universally present; and, as he points out, it is even more strongly excited by breaches of social decorum too trivial to be within the pale of morality, and when it attaches to breaches of the moral law is by no means proportioned to their magnitude. Again the contemplation of virtue produces æsthetic emotion, very intense and vivid in certain minds and under certain circumstances; and perhaps an ideally cultivated taste would derive most pleasure from the type of character most preservative of social tissue; but actually the play of this emotion diverges very much from this ideal—which is of less practical consequence since it is not an important element of the ordinary moral consciousness.

The emotion most essential to conscience, in Mr. Stephen's view, is a kind of "corporate sentiment" or feeling of "loyalty," which grows up normally towards any association of human beings and carries with it "a sense of obligation". The sentiment of duty "has the same relation to the social tissue as the various special sentiments corresponding to each organ or association have to the body to which they correspond"; and the narrower associations—especially that of the family—are a school in which the mind is trained for the wider sentiment. I do not quite understand what is meant by "having the same relation": that virtue tends unconditionally toward preservation of social tissue we have been already told; and Mr. Stephen does not mean that in the ordinary judgments of conscience this preservation is explicitly recognised as the ultimate end. Nor does the "sense of obligation" seem to be adequately explained when it is referred to the "perception that the rule is formed by something outside us, that we imbibe it from the medium in which we live"; since so long as we observe the rule merely as external, and not from an intrinsic motive, our action is not, in Mr. Stephen's view, properly moral.

In c. ix., Mr. Stephen passes definitely from psychology and sociology to ethics, and discusses the fundamental question of the criterion of morality. By this time the careful reader will have come to feel a certain curiosity as to the choice which the author means to make between the two ultimate ends and standards of moral conduct to which the two lines of reasoning conducted in the preceding chapters seem respectively to lead. As we have seen, from the point of view of subjective psychology he has arrived at the conclusion that it is

reasonable for the individual to aim at maximum general happiness; while from the sociological point of view preservation of social tissue has throughout been presented as the end to which the whole development of positive morality is a means. Which of these, then, will he take as the ultimate end for a true or ideal morality—happiness or preservation? Mr. Stephen fully recognises that he has to “justify morality both as happiness-giving and as life-preserving,” and that if the ends diverged he would “get into considerable difficulties”: but he thinks it sufficient to say that “the very principle of evolution implies that there must be at least an approximate coincidence, and there is no apparent *a priori* reason why the coincidence should not be indefinitely close”. I submit that, in the first place, this is much too short a cut to Optimism. The principle of evolution, as I understand it, decides nothing as to the issue between Optimism and Pessimism: Von Hartmann and Mr. Herbert Spencer may equally hold it. All it involves is that, when preservative and destructive actions are presented as alternatives, the preservative must be, generally speaking, the less painful: but whether life on the whole has a balance of inevitable pain is a question to which evolution has nothing to say. Now Mr. Stephen admits that if he were a pessimist, “if the preservation of the race meant a continuance of misery,” he could not reasonably take preservation as his criterion of morality; hence, as he does practically choose the evolutionist criterion in preference to the utilitarian, his ethical system is logically bound to include an adequate confutation of Pessimism—which he has certainly not given us. And I would suggest that the real need of this proof has been partly concealed from the reader by Mr. Stephen’s continual use of the terms “social welfare,” “wellbeing,” and even “health,” instead of mere “preservation,” in speaking of his evolutionary criterion: since all these terms naturally imply that the existence preserved is a desirable existence.

But secondly, even supposing Pessimism confuted, the complete coincidence of conditions tending to general happiness with conditions tending to social preservation is very far from being made out; since, so far as we know, of two social states which equally tend to be preserved, one may be indefinitely happier than the other. We may grant that in the early history of morality—when to live at all was a difficult task for human communities—the maintenance of preservative habits and sentiments was its most important function: but it is not therefore reasonable that we should permanently be content with the mere securing of existence for ourselves or for humanity generally, and should confine ourselves to efforts at making this security greater, instead of seeking to make the secured existence more desirable. Nor can I even grant that the criterion of “tendency to preservation of social tissue” is necessarily more easy to apply than that of “tendency to happiness,” even so far as the two ends are coincident; still less that it “satisfies the conditions of a scientific criterion”. Were Sociology a science really constructed, this would doubtless be the case: but Mr. Stephen has himself told us—in

stronger language than I should have ventured to use—that sociology at present “consists of nothing more than a collection of unverified guesses and vague generalisations, disguised under a more or less pretentious apparatus of quasi-scientific terminology” (p. 10). If this be so, I submit that the practical superiority of the evolutionary to the utilitarian criterion, is not established even by the most vigorous exposition of the defects of the latter.

I quite admit the effectiveness of Mr. Stephen’s criticisms on the utilitarianism which treats society as a “simple combination of independent atoms of uniform and constant nature,” among whom “happiness is a kind of emotional currency capable of being calculated and distributed in lots,” which have “a certain definite value independent of any special tastes of the individual”. But the system thus criticised seems to me to be a caricature even of Bentham’s, who has a great deal to say about the variations of the individual’s sensibilities, and to have very little resemblance to any system that has flourished since the influence of J. S. Mill—and, chiefly through Mill, of Comte—has been strong. And here I may remark, that Mr. Stephen seems to me throughout to exaggerate the novelty, not of his own speculations, which he is rather disposed to underrate, but of those of the English Evolutionist school: he seems hardly aware that the ideas of “sociology,” of the “social organism” and its relation to its environment, of the need of a positive and historical study of ethics and politics, were familiar to Englishmen from Comte’s writings, long before the theory of natural selection was invented.

From the discussion of the true criterion of morality, Mr. Stephen passes (in c. x.) to examine the adequacy of its sanction: or, in other words, the extent of the coincidence of Virtue and Prudence. That the two “approximately coincide”—in the wide sense Mr. Stephen gives to this adverb—will not probably be denied: nor will any one who accepts the general doctrine of evolution doubt that the progress of society has a certain tendency to produce healthy individuals whose characters conform approximately to the prudential ideal, and also individuals who have the social affections strong. But it does not necessarily follow that the two developments tend to coincide very closely; for though doubtless in a society where sympathy is generally vigorous, a man markedly defective in this respect is likely to be less happy, we cannot therefore argue that the precise development of sympathy which will be most useful to society will also be most conducive to the happiness of the sympathetic individual.

Nor does Mr. Stephen try to prove this. He points out in the first place that the type best adapted for social tissue includes many qualities besides those in which popular morality recognises merit, because they are qualities which do not comparatively require the encouragement of praise. “Nature,” says Mr. Stephen, characteristically, “wants big, strong, hearty, eupeptic, shrewd sensible human beings; and would be grossly inconsistent if she bestowed her highest reward of happiness upon a bilious, scrofulous, knock-kneed saint,” &c. This, however, is really rather an argument against popular morality—as in

fact Mr. Spencer uses it : except so far as the useful qualities in question are connate superiorities, in which case they are not really relevant to the question at issue : since—taking Mr. Stephen's comparison—in order to prove the coincidence of Virtue and Prudence, we are not bound to show that a naturally bilious saint is happier than a naturally eupeptic sinner, but merely that he is happier than a sinner of the same unfortunate physical constitution. But in fact, as Mr. Stephen goes on to explain, though we may show that ordinary virtue tends generally to the interest of the virtuous individual, we cannot fairly deduce from the doctrine of evolution even this general presumption in respect of the virtue that is before its age. So again, if we consider the question from the point of view of the man who is not yet virtuous and ask if it is his interest to become so, the conclusion seems to be “that, as a very general rule at least, obedience to the external moral law is a matter of prudence for everybody; that it can be proved to almost any man that it is safer for him not to be at war with his fellows or indulge his appetites to excess; but that, on the other hand, it cannot be said with any confidence that if we were to consult the happiness of the agent exclusively, we should always try to instil into him habits of virtue which transcend this rather moderate limit.” Still more clear is it that we cannot establish the coincidence in particular exceptional cases: that, to take the old stock instance, we cannot deny that Regulus may have been imprudent in returning to Carthage; “it may be true both that a less honourable man would have had a happier life, and that a temporary fall below the highest strain of heroism would have secured for him a greater chance of happiness”. And Mr. Stephen is even inclined to think that not merely heroism but “even virtue of the ordinary kind demands real sacrifices upon some occasions”. He sums up, indeed, by saying that the acquisition of altruistic sentiments may be recommended on merely prudential grounds; but he does not deny that from the point of view of the individual's happiness it would be better to cultivate them—like other tastes and impulses—in such a way that they would submit when necessary to the supreme control of the prudential reason. Whether he is right in holding that this conclusion “does not diminish the intrinsic motives to virtue, inasmuch as those motives are not really based upon prudence,” is a profoundly important question, which I have not space to argue adequately; but Mr. Stephen would not deny that the development of civilised morality has, throughout its history, been accompanied by a general belief in the coincidence of virtue with the happiness of the virtuous agent, though with very different views as to the precise manner in which this coincidence is to be realised: and I cannot but think that he much underrates the support which ordinary morality has received from this belief.

Before leaving this topic, I must dispute Mr. Stephen's assertion that the problem presented by the relations of virtue and prudence is “bound up in the old one of the origin of evil”. I should rather say that if the former were satisfactorily settled, the latter would still remain, but would cease to have more than a merely speculative inte-

rest. I do not explain why I am in a world full of misery by proving that my own happiness would always be maximised by the same conduct that would maximise happiness generally; but if I were convinced of this latter proposition, and could ascertain the conduct that would have these consequences, the solution of the former problem would have no practical importance.

In a concluding chapter Mr. Stephen deals briefly with what some would call the Metaphysic of Ethics—not that he himself would use the term, since it is his avowed aim to separate his “scientific” treatment of ethics from all metaphysical admixture. A writer who makes this his aim is usually liable to leave something wanting in the statement of his first principles: and Mr. Stephen seems to me no exception to this rule. If I had to state the basis of his ethical system, I should describe him as holding that the general happiness of human beings was, in the abstract, the right ultimate end of human action, but was inapplicable as a criterion for the determination of actual rules; for which purpose, therefore, preservation of social tissue, being necessarily coincident with general happiness, must be taken as the practically ultimate criterion, and the end that ought to be consciously aimed at. But no such statement as this—in which the term ‘right’ or ‘ought’ is necessarily introduced in an absolute sense—is explicitly made by Mr. Stephen; and he often makes statements which seem to me incompatible with a clear apprehension of the necessary nature of an ethical first principle. He says, for instance, that the question “which man would on the whole observe the genuine moral code with the fewest exceptions” is “a question of fact, to be settled by psychologists and direct observation” (p. 38); and again “it is a simple objective fact that a man acts rightly or wrongly in a given case”. Now, undoubtedly, the conduciveness of an action to human happiness is a fact ascertainable—at least theoretically—by psychological observation and inference: its conduciveness to the preservation of social tissue is a fact similarly capable of being brought to the test of sociological observation; but neither psychologist nor sociologist can observe that either general happiness or preservation of tissue is the true ultimate standard for determining right and wrong, the true ultimate end to the realisation of which the “genuine” or “ideal” moral code is the best means. Such propositions as these are purely ethical and do not represent “facts” either of psychical or physical experience. Similarly, when Mr. Stephen maintains that it is capable of “scientific proof” to a murderer that murder is “wrong, as being opposed to that underlying moral code which expresses the conditions of social welfare,” I must again answer that it may doubtless be scientifically proved that murder is not generally conducive to the preservation of social tissue, but that if it can be scientifically proved that the murderer ought to adopt the preservation of social tissue as his ultimate end, the proof must be different in kind from any reasoning that Mr. Stephen has used; and I am unable to conjecture how he would set about constructing it. In a later passage (p. 448) Mr. Stephen seems to suggest that the historical method may lead us to

such a proof. He says that we "may look for some approximation to agreement" in ethics and politics as the historical "method is more generally adopted and more systematically carried out . . . when we cease to ask 'what is the moral' and ask 'what men have actually admired'"; since the "true nature of the thing" may then reveal itself. But the "true nature of the thing" is in this case the true answer to the ethical (or political) question "what is ultimately right or good": and if Mr. Stephen holds that the examination—on however large a scale—of men's opinions as to what is right or good will supply a cogently reasoned answer to this question, I can only entreat him to state explicitly and fully the steps of the reasoning by which this result is reached; since I have long and vainly sought for such a statement in the most elaborate treatises of the historical school.

H. SIDGWICK.

Ἀριστοτέλης περὶ Ψυχῆς. *Aristotle's Psychology* in Greek and English, with Introduction and Notes by EDWIN WALLACE, M.A., Fellow and Tutor of Worcester College, Oxford. Cambridge: University Press, 1882. Pp. cxxviii., 327.

It is a marked tendency of thought at the present day, on the one hand, to set aside as insoluble, or condemn as unprofitable, the fundamental problems of philosophy, and, on the other, to build, more or less blindly, upon the very unstable foundations laid by one or two modern men. Under these circumstances, it is a genuine pleasure to meet with a work like the present, solid, scholarly and testifying to a sincere willingness on the author's part to reconsider the principles and assumptions of philosophy and without prejudice to accept light from whatever quarter it may come. It is, moreover, a hopeful sign when a thoughtful man turns back to Aristotle, and, disregarding the obloquy with which his doctrines have frequently been treated, especially by popular English thinkers, makes it his purpose to present these doctrines in an intelligible modern form. This is what Mr. Wallace has done with respect to Aristotle's psychological doctrines, and, let us say it at once, has done with most praiseworthy success. In saying this, we do not mean either that Aristotle's theories are tenable in the light of more recent thought, or that Mr. Wallace's work is perfect; but the former have, at least, a profound interest for the historian of thought, and the latter is so very good that one feels almost ungrateful in pointing out its few shortcomings.

The work before us consists of a clearly and dispassionately written introduction of 116 pages, a carefully edited Greek text, a free translation into English, for the most part easy and accurate, two appendixes—one giving the additional version of part of Book II., from the Paris MS. (E), the other all the ancient testimonies relating to Aristotle's psychological dialogue, *Eudēmos*—excellent indexes and a partial list

of "recent works relating to the psychology of Aristotle". In his preface, the author says: "Explanation, rather than textual criticism, has been the end which I have set before myself". In pursuance of this end, he has availed himself of the aid derivable from the whole of Aristotle's works, from the Greek commentators on the same, and from "recent works" written to elucidate the *Psychology*. He has voluntarily declined to call in the aid of Plotinus and the Arab and Scholastic commentators of the Middle Ages, and has, no doubt involuntarily, overlooked not a few very important modern aids. That he should have neglected the acute criticisms of Plotinus, some of which wound Aristotle's principal theories to the very heart, is all the more to be regretted that the merits of that thinker as a critic of Aristotle have elsewhere been so imperfectly recognised. Had Mr. Wallace read the passage from Plotinus quoted by Eusebius (*Præp. Evang.* XV. 10), we think he would hardly have dealt so leniently as he has done with Aristotle's definition of the soul; and had he consulted the fourth *Ennead*, he would not have failed to find many things throwing light upon Aristotle's doctrine of a creative reason, about which he not unnaturally entertains some doubt, and which, indeed, he has not quite correctly explained. One can hardly blame a writer nowadays for being unwilling to launch himself on the sea of mediæval commentary, with its cumbrous method and endless fine-drawn distinctions; nevertheless, no one can become familiar with the best of these commentators—Averroes, Albertus Magnus, Thomas Aquinas, &c.—without discovering that they have been very much undervalued in modern times, and that they often throw a flood of light upon the most vexed passages of Aristotle. The truth is, these men had a familiarity with the doctrines of the Stageirite, which we should look for in vain in any modern writer—a familiarity which enabled them to see each part of the system from the point of view of the whole. Hence Trendelenburg can hardly be acquitted of the charge of flippancy when he writes: "Omnia, quæ medio præsertim ævo ad hoc de anima scriptum allata sunt, conquirere nec potuimus (!), vix enim tanti labori vita suppeteret, nec, si potuissemus, voluimus" (*Præf. ad De An.* p. lxix.). The Schoolmen in many cases thought out in clearness, and fixed for all time, distinctions which in Aristotle's mind remained floating and vague, and in his writings never found adequate expression. Among these may be specially noted the distinction between immanent act (*actus purus*, *ἐνέργεια*) and transient action (*actio*, *πρᾶξις*, *κίνησις*)—a distinction which Mr. Wallace, not without detriment to his work, has altogether overlooked. It is, indeed, impossible to arrive at an adequate conception of Aristotle's creative reason (*νοῦς ποιητικός*—the expression, by-the-by, does not occur in Aristotle) which "does not at one time think, at another time not think," and which "is unaffected by its objects," without having a clear notion of that immanent act which he calls the "act of the completed" (*ἡ ἐνέργεια ἢ τοῦ τετελεσμένου*). Had Mr. Wallace fully grasped this notion, he would hardly have used the Hegelian

term, *process*, to designate the *νοῦς*; for, if there be anything which the Aristotelian *νοῦς* is not, it is *process*.¹

Mr. Wallace's Introduction, divided into thirteen chapters, after treating of the psychological treatises of Aristotle and their relation to his other writings, the scope and method of Psychology as conceived by him, and the pre-Aristotelian psychology, proceeds to give a *résumé* of the work under consideration. This Introduction is a clear, concise, forcible and altogether excellent piece of writing. It avoids all unnecessary subtleties and technicalities, and yet faces and grapples with every difficult question. It testifies to a very accurate knowledge of Aristotle's writings and an excellent judgment in dealing with his not seldom contradictory statements. The most interesting chapter in it is the eleventh, headed "Aristotle's Theory of Thought," a subject which has vexed the thinking world from the days of Theophrastos to our own, and which even Mr. Wallace cannot be said to have treated altogether successfully. This we have already hinted, and Mr. Wallace seems himself to be partly aware of it (see p. cvii.). On one main and much disputed point he must be pronounced unquestionably right, *viz.*, in holding that Aristotle maintained the doctrine of a one universal intellect. In this he sides with Eudēmos, Alexander of Aphrodisias, the Arab Peripatetics, Albertus Magnus, Hegel, Rosmini, Ravaisson, Renan, and Zeller, against Theophrastos, Themistios, Thomas Aquinas, Suarez, Trendelenburg, Brandis, and Brentano. When, however, he declares, on the one hand, that this "creative intellect is clearly, to begin with, not the intelligence of

¹ It is curious enough that of the twenty-six recent works named by Mr. Wallace as having helped him in some way or other in arriving at his conclusions, twenty-three are by Germans, two by Englishmen (Grote and Lewes), and only one by a Frenchman, while works by Italians are entirely ignored. The list omits the following works, several of which are more important than any contained in it.

(1) Rosmini-Serbati (A.), *Aristotele Esposto ed Esaminato*, Turin, 1858, 8vo, pp. 676. Though not free from mistakes, and though badly printed, this is by far the ablest work on Aristotle written in modern times, or, indeed, perhaps in any time. Of all great thinkers, Rosmini is almost the only one who so thoroughly emancipated himself from Aristotle's influence as to be able to lay bare with a just and unflinching hand the radical defects of his system.

(2) ——— *Nuovo Saggio sull' Origine delle Idee*, 6th ed., 1875-7, 3 vols. 8vo, pp. lxiv., 429, 539, 485. The part relating to Aristotle is in Vol. I., §§ 222—274.

(3) Ferri (L.), *La Psicologia di Pietro Pomponazzi secondo un manoscritto della Biblioteca Angelica di Roma* (Comento inedito al *De Anima* di Aristotele), Rome, 1877, 4to, pp. 220. Prof. Ferri's Introduction to this work (pp. 84) contains many valuable suggestions.

(4) Barco (G. B.), *Aristotele: Esposizione Critica della Psicologia Greca. Definizione dell' Anima (Il Trattato dell' Anima, lib. i. and cc. 1-3 of lib. ii.)*, Turin and Rome, 1879, 8vo, pp. 69. A continuation of this work has recently appeared, with the title: *Dell' Anima Vegetativa e Sensitiva, Saggio di Interpretazione*, Turin, 1881.

(5) Schell (J. H.), *Die Einheit des Seelenlebens aus den Principien der aristotelischen Philosophie entwickelt*, Freiburg i.B., 1873, 8vo, pp. viii., 269.

God," and, on the other, that it "easily approximates to that universal thought or λόγος 'which was in the beginning'—as the *a priori* condition of a rational experience—and which was also God himself" (pp. cix. sq.), one is at a loss to know what he means. Aristotle's own opinion on the subject is clear from a fragment of the dialogue *On Prayer*, in which it is said that "God is either intellect or something beyond intellect" (ὁ θεὸς ἢ νοῦς ἐστὶν ἢ ἐπέκεινά τι τοῦ νοῦ. Frag. 46 ; 1483 a 27 sq.). The truth is, Aristotle was a pantheistic materialist. For him the universe consisted of an unreal, merely potential matter actualised into temporary entities by forms intrinsically empty and having their locus (τόπος) in a single supreme form (εἶδος εἰδῶν) which was intellect or God. Mr. Wallace, therefore, goes too far when he tries to make Aristotle an Hegelian and a panlogist. It is true that there are many points of agreement between Aristotle and Hegel, due, in great measure, to borrowing on the part of the latter; but Hegel, in his eagerness to get rid of the 'Ding-an-sich,' even in the mild form of unreal, unknowable matter, in which it was accepted by Aristotle, involved himself in crude absurdities, which it is unfair to attribute to the older philosopher. Indeed, if there be one grave fault to be found with Mr. Wallace's interpretations of Aristotle, it is a tendency to take advantage of the vagueness and contradictoriness of some of his doctrines to give them an Hegelian twist. For example, when he confounds truth with realisation, in such statements as "the soul is the substance—that is, the concrete reality or substantive truth of the body," he is using "truth" in a false, Hegelian sense, utterly foreign to the spirit of Aristotelianism. No doubt Hegel's panlogism, which is, and must be, throughout a system of equivocation, requires that truth should be confounded with reality, and thought with being; but no one can be familiar with Aristotle's writings, without knowing that to him they are wide as the poles asunder. He certainly never dreamed of identifying ἀλήθεια with ἐντελέχεια, a quality of judgment with a perfection of essence. Again, when Mr. Wallace tells us that "every real thing is at once individual and universal, it is an individual universalised by the relations in which it exists or an universal individualised through the particular conditions which determinate existence imposes upon it," he is using language which not only involves contradiction but is entirely alien to the thought of Aristotle. That philosopher certainly never dreamt of the Hegelian doctrine which lays down that a thing is the sum of its relations. His doctrine of universals is blundering and self-contradictory enough; and this for the reason that, in his eagerness to differ from Plato, he obliterated the distinction between the real and the ideal, between the *individuum vagum* of abstraction and the *idea* of intuition; but he is perfectly clear in regard to the source and principle of individuality, which, according to him, is matter and not relation or "particular conditions"—if, indeed, this last expression is not purely tautological. A very slight acquaintance with the Arab and Scholastic commentators would soon have impressed this fact. Indeed, had Mr. Wallace been more familiar with these old thinkers

and less so with the vagaries of Hegel, his account of Aristotle's theory of thought could hardly have failed to be more correct than it is. We should not then have had the creative reason, whose energy Aristotle compares to that of light, presented to us as something that "must construct an intelligible world, an object of thought in which and with which it may operate" (p. civ.). Surely no one, who did not wish to be paradoxical, would say that light "constructed" the visible world. There is a wide distinction between constructing and manifesting, and there is no sense in which light can be said to "determine and constitute the very subject-matter of its action". One cannot but profoundly regret that Mr. Wallace should have allowed himself to be misled by Hegel into such misinterpretations.

In chap. xiii. of his Introduction, Mr. Wallace undertakes to give a "general estimate" of Aristotle's psychological doctrines. This, though by no means flattering, must still be pronounced over-indulgent. The source of this indulgence one easily discovers in such a statement as this: "The conception of a personal, isolated and yet universal, self, had not been grasped by the philosophers of antiquity," which implies that the conception has been grasped by philosophers in modern times. Against this implication we can only enter our strongest protest, and declare that no such conception is even possible, inasmuch as it involves a contradiction. Indeed, the supposed notion of a personal, universal self is as pure a piece of metaphysical mythology as any Comtist could desire to make an example of. By admitting such a conception, Mr. Wallace is prepared to deal leniently with the *νοῦς ex machina* in whose inscrutable action Aristotle lodges the solution of all those problems of thought which he cannot disentangle. It is the old story of translating a known effect into an unknown cause, giving the latter a name and calling it an explanation. Aristotle's creative reason is no more an explanation of thought or things than vital force is of life, or phlogiston of combustion. The same may be said of his notion of soul as the realisation of the body. So regarded, the soul is merely the sum of the activities of the body abstracted in the form of a cluster of potentialities. This view, instead of helping us to knowledge, merely increases words without understanding. As Lotze puts it: "The doctrine of soul-faculties may be considered a convenient method of cataloguing mental activities, but it is no explanation of them" (*Grundzüge der Psychologie*, p. 73).

When Mr. Wallace, still leaning toward Hegel, tells us that Aristotle's theory of a creative reason is "an emphatic assertion of the priority of thought to matter in the universe" (p. cxxviii.), we must call this unqualified statement in question, and demand proof of it. If thought be prior to matter, matter must have been created or produced; but we have Aristotle's distinct assertion that matter is unproduced and indestructible (*ἀφθαρτον καὶ ἀγέννητον ἀνάγκη αὐτὴν εἶναι*. *Phys.* A, 9; 192 a 28 sq.: cf. *Metaph.* A, 3; 1069 b 35 sq.). There certainly can be nothing prior to that which has no beginning. These few examples will perhaps suffice to show how completely one part of Mr. Wallace's work is vitiated by Hegelian prepossessions. We

are sorry to be obliged to make this adverse criticism on a book otherwise generally so admirable; but Hegelianism plays such havoc with correct interpretation, wherever it obtains admission, that it must be carefully checked by every one who desires to arrive at truth.

Mr. Wallace's text of the *De Animâ*, based chiefly on the editions of Trendelenburg and Torstrik, is all that could be desired. He deserves great praise for the conservative manner in which he has dealt with it, and the patience and success with which he has elicited meaning from seemingly desperate passages, without altering the traditional readings. He possesses, indeed, a hermeneutical talent of the very highest order—a talent which has enabled him to set aside many of Torstrik's rash suggestions, and even wholly to disprove the theory that the text of the third book is made up from two versions. His choice of various readings is in the highest degree judicious and useful.

The translation is for the most part fluent and correct. It suffers, indeed, from a little verbosity, consequent upon an attempt to clear it of Græcisms; but this is a very slight fault, and perhaps hardly avoidable. Here and there we find an awkward sentence, as for example this one, which occurs on the very first page: "The object of investigation *is*, it *is* true, the same here as it *is* in many other subjects—it *is*, that *is*, the question of the essential notion of the generic character" (the italics are ours). Still more frequently do we find entirely false renderings, some of which seriously interfere with the sense and must be regarded as blemishes. On page 25, we find *φθίσις* rendered by "decomposition," instead of by 'decay' or 'diminution'. On page 29, *συνεφέλκειν* is rendered by "to contract," instead of by 'to draw along,' and thereby the whole sense of Dêmokritos's doctrine of the soul is obscured and the passage rendered meaningless. Here Mr. Wallace evidently confounded *συνεφέλκειν* with *συνέλκειν*. In several places, the word *ὁμοειδής* = 'of the same species,' is rendered by "homogeneous," a rendering which in one instance destroys the sense of a passage. On p. 5, ll. 24 *sqq.*, we read: "Another question, we shall have to ask, is whether it [soul] is divisible or free from parts, and whether again all souls are homogeneous [*ὁμοειδής*] or not; and if not homogeneous, whether it is specifically or generically that they differ". This, of course, is meaningless. If souls are not homogeneous, *i.e.*, of the same genus, there can be no question as to whether they differ generically; whereas, if they are not of the same species, the question may very well arise whether it is in genus or *merely* in species that they differ. On p. 21, we find *ἀναθυμίασις* translated "fiery process," an expression which is as false as it is Hegelian (see Hegel, *Gesch. der Philosophie*, Vol. I., pp. 339, *sqq.*, edit. 1833). It would be easy to swell the list of these mistranslations; but the task is an invidious one, and we prefer to speak of the merits of the work rather than of its demerits, which are in a very small minority.

Mr. Wallace's notes are just what notes ought to be, neither too many nor too few, giving no superfluous explanations and shirking no real difficulty. In not a few places we find Hegelianism intruding

itself injuriously ; but perhaps enough has already been said upon this subject. Everywhere we meet with evidences of a long and careful study of the works of Aristotle and a patient endeavour to arrive at his real meaning. If there is anything that we desiderate, it is a plain statement of the scientific value of Aristotle's various theories and their bearing upon modern science and thought. Hardly any greater service could be rendered to modern philosophy, which is still shackled by Aristotelian prejudices, than, once for all, to exhibit the presuppositions and implications of Aristotle's main theories. For such a service there is plenty of room even after Lewes's unfortunate work.

Thus far we have dealt only with Mr. Wallace's labours, and, apart from an undue tendency to Hegelianism, we have found little that does not deserve high commendation. A further question, however, comes to be : What is the value for science of Aristotle's doctrine itself, when explained correctly ? To the historian of human thought its value must be admitted to be very great indeed. Few philosophical doctrines have played so important a part in the world as those propounded by Aristotle in regard to the soul and the nature of thought, and it is, therefore, of the highest moment that they should be thoroughly comprehended. To the philosopher, as such, on the contrary, the value of most of these doctrines is very problematical. Something no doubt may still be learnt from the clear distinction maintained by Aristotle between sensation and intelligence, so often lost sight of at the present day ; but this, we fear, is the sum of what he has to teach us. His vague, Oriental and useless doctrine of a universal intelligence, his confusion between the ideal and the real, his identification of the action of intelligence with its objects, his vacillating views concerning the nature of universality, his theory of the nature of the soul, and his tautological definitions, are all things which have to be understood only in order to be avoided. In the last three hundred years great progress has been made towards emancipation from Aristotelianism and its pantheistic, materialistic doctrines ; but such sad relapses as Hegelianism ought to show us how little assured even now our liberty is, and how earnestly we ought to strive to rid ourselves of those false ideal unities, which, when embodied in institutions, ever threaten to return us to slavery. We shall never be able to attain a rational or consistent explanation of the order of nature until we clear the field of philosophy from all those fictitious conglomerates, such as universal self, the Absolute, the Idea, which still encumber it, and until we learn that what we call the universe is the composite result of the activities of an unknown multitude of eternal, self-existent, self-centred entities each more or less intelligently striving with or against the rest for its own highest good. Until we learn this, the world will seem a tissue of iniquities and an insoluble riddle.

THOMAS DAVIDSON.

Das Leben der Seele, in Monographien über seine Erscheinungen und Gesetze. Von Prof. Dr. M. LAZARUS. Zweite, erweiterte und vermehrte Auflage. 3 Bände. Berlin: Dümmler, 1876-1882.

In these three volumes on the Life of the Soul, into which are expanded the two volumes that appeared in 1856-7, Professor Lazarus seeks to formulate and develop the laws of psychical activity in a series of monographs on "Culture and Science," "Honour and Renown," "Humour," "The Relationship of the Individual to the Community," "Mind and Speech," "Tact," "Blending and Co-operation of the Arts," "Friendship," and "The Origin of Morals". It may seem somewhat surprising that a work of this kind should appear in so free and novel a form, but our author is content to sacrifice conventional dignity in the hope of giving the results of scientific investigation in a shape acceptable to the cultured world at large, more particularly to the daily-increasing class of thinking women.

According to Lazarus psychology is a natural science. Every thinker is conscious of his thoughts and feelings, is aware of the psychical states of the moment; every cultured man seeks to have before the eye of the soul a true picture of the whole of his inner life, both past and present. But science endeavours to get a knowledge of subjective experience generally, of all events and processes in the realm of soul. And not only a knowledge of facts but an appreciation of causes—an *explanation* of the phenomena—is what we understand by science. After Aristotle psychology sought only the first-named object, and found nothing but an enumeration and classification of the various kinds of inner activity, to which as many and various powers were ascribed. Locke and Leibniz were the first to undertake a more exact psychological consideration and examination of the concrete individual, but in the Wolffian school the newly-cultivated field again lay fallow. It was at the beginning of this century, in Lazarus's opinion, that psychology assumed the character of a science. With his inquiry into the *laws* of psychical life Herbart prepared for our science a foundation which cannot be shaken, pointed out the road along which alone it can progress, the goal at which it has to arrive.

No doubt the first stage of insight into the multiform manifestation of soul is reached by simple reflection on the inner processes of one's own subjective experience; that is, both before and apart from science. More especially is this the case when, in the interest of poetic creation, the phenomena of mental life are distinguished and their qualities recognised by means of the apperception-organ, namely, Language. In historical times every cultured man receives with his mother-tongue the more or less clear understanding of those views which have been formed from the psychological facts in the public mind of his people. Thus, if an Englishman is asked, What is freedom? he can describe it in many ways, according as it is liberation, disengagement, release, enlargement, emancipation, breaking loose, shaking off the yoke, unfettering, enfranchisement, manumission, discharge, dismissal, deliver-

ance, redemption, extrication, acquittance, absolution, acquittal, escape. But in each particular instance only a few of the words can apply. If, on every occasion, we have every single side of a thing present in consciousness, it is nevertheless an unusual and by no means easy task to collect these scattered members of the whole and to realise them in the mind. This difficulty is greatly felt wherever the various sides of the phenomenon belong to entirely different spheres of the inner life.

What is Tact? What are we to understand by Friendship? What is the meaning of Culture, Humour, Language? The floating elements of inner perception are crystallised, through the word, in representation. Prof. Lazarus undertakes to show us what is meant by this symbolic condensation, and what are the conditions under which the phenomenon manifests itself. To the older psychology the question would have presented itself thus: to what special faculty is this phenomenon to be referred, or, has it not an independent existence by the side of other faculties, which may be possessed by one man and not by another? Such philosophical mythology, however, can lead to no real result, as has often been proved, and, in this case, Lazarus points out that, inasmuch as "tact," for instance, rests upon intellect, feeling, imagination, memory, and volition, it comes to little more than this: if one possesses intellect, feeling, &c., then too one has tact, and that again amounts to: if one is a man, one has tact. And if it be urged: no, only if a man has a certain kind of intellect, a certain kind of feeling, &c., then he has tact, nothing more is really said than: if one has tact, one has tact.

If, then, we would understand and explain any given phenomenon of our subjective existence, we must reduce it to its conditions, must find out the *processes* that take place in the mind, and study the laws of reproduction: in a word, we must understand the mechanism of consciousness. That Prof. Lazarus is always equally successful in disclosing the fine-spun threads of continuity and order in the life of the soul, is not to be expected. Here and there we notice that the structure is defective in the combination and grouping of its various parts, to say nothing of the needless repetition which seems to be common to all psychologists. Some of the studies, however, are masterpieces of psychological exegesis, whilst, of the monograph on "Mind and Speech," which takes up the whole of the second volume, it is perhaps not too much to say that it is the most complete and exhaustive contribution to the psychology of language that has yet been given to the world.

In endeavouring to answer the question, What is Tact? Prof. Lazarus begins by showing that it consists, first of all, in a wakeful delicacy of *attention* to all relations of the action of the moment. He then goes on to point out wherein the attention involved in tact differs from what is usually understood by it. In the realm of what is called tact, the mainspring of our action and conduct affects relations of which we are not clearly conscious, but which, nevertheless, have an effect upon the shaping of our action. And here we must not forget that the most important processes of our inner life take place quite in-

voluntarily. The laws of association, amalgamation, and complication, of union and of combination, with their corresponding reproduction, operate without the least intentional help on our part. It is doubtless true that we are able to direct our attention hither and thither both internally and externally, to make this or that the subject of our reflection, but, when we truly consider its range, it is so small that it cannot in the remotest way be compared with what the soul every moment effects undesignedly. Indeed, our selective attention itself would be well-nigh impossible, were it not for that regular movement of ideas which forms the basis upon which the mind designedly proceeds to build. That is to say, all conscious reflection is nothing more than a command and control of those laws of motion which are otherwise continually operative without purpose. Then, there is the simple psychological fact that, each moment, we can only think clearly and consciously a *small series of concepts*. All others, though in our soul, are not in our consciousness, but, so to speak, beneath the horizon. These simple psychological laws are easily proved experimentally. There is yet another which must be borne in mind if we would rightly appreciate the meaning of tact, namely, that every vivid idea which is in our consciousness calls up all others that are in any way connected and related. But, for this summoning to consciousness of the immediately-remembered ideas and those connected with them, a certain amount of time is requisite, which we must not fail to take into account. Tact, then, is that ready attention which appreciates the relations contained even in the fleeting ideas which glide through consciousness when a man is in society; that susceptibility and conscientiousness which enable him to pass judgment on those fleeting germs of a consciousness, so that his procedure is determined by it,—in short, when even the ideas which have scarcely come into consciousness work as effectively as the vivid and conscious ideas upon his judgment.

In his psychological analysis of Humour, Lazarus finds it to consist in a *contrast*: it is the union of the sublime and the comic. Humour may, indeed, be said to be a *Weltanschauung*. Fundamentally different from that of the satirist is the laughter provoked by the humourist. "The satirist amuses himself, when and because he vexes himself; the humourist amuses others where he afflicts himself. Satire finds fault while it laughs, humour weeps; satire pours out gall. . . . humour tears; 'to humour belongs, for the most part, harmless irony;' one might almost say, satire curses and humour prays".

Passing on to Prof. Lazarus's contribution to aesthetic theory we have to ask: In what way do the Arts co-operate and blend? In looking at a fine model or beautiful picture, is our pleasure disturbed or enhanced by listening to an appropriate musical accompaniment? Lazarus thinks that, owing to the contrast of the simultaneous and successive among impressions of sight and hearing, which, moreover, is increased by the difference in the process of apperception, there cannot but be disturbance through their simultaneity. Lessing's researches into the provinces of the various arts and the limits of

artistic principles, though of lasting worth to all art-doctrine, were nevertheless restricted to a purely aesthetic question, namely, that of determining the aesthetic function and status of each particular art; that is to say, an examination into the nature and contents of the arts and their value as sensuous media. Lazarus seeks to point out in what way aesthetics is related to psychology. After mentioning the rules respecting the highest forms of artistic harmony, he goes on to show how the form of the beautiful is identical with the form of ideality generally. According to this view, the beautiful is the idea of form. To know or conceive a thing means to apprehend its idea. Now, the idea is most fully manifested in the beautiful. The beautiful pleases us because in it the idea arrives at complete perception. Therefore, that is beautiful which is a complete representation of the idea, which brings the idea to sensuous perception. The truth of things manifests itself in beautiful form, for in it and through it shines the idea of the thing. No new truth is produced by beauty, but through it the truth of things is perceived by the senses; beauty pleases because it finds expression for the idea, makes it manifest, and gives it a sensuo-perceptual form.

The essence of the human mind is revealed in its activity; its aim is the development of a many-sided ideality, *i.e.*, the discernment of ideas and their realisation. To the mind the universe is the subject of cognition. The striving after completeness of knowledge is called the idea of truth, which is revealed in the evolution of all ideas of being. The picture of the world which is formed in the mind is no passive reflection, but the product of lasting and ascending creative activity. Then comes the question: How is the idea of the beautiful related to that of the true and the good? Shortly speaking, one may say that the connexion between the ideas of the ethical and those of the physical consists in the fact that, by means of the psychical and more particularly of the volitional, morality must become real and reality moral. All human ideality is subject to law—physical, psychical, and ethical. Everything true and good, real and ideal, everything sensuous and everything moral, when once it is manifested, has a certain form. And this has its own peculiar ideality; this, too, is subject to a specific regularity: this ideality of form is the beautiful. If we characterise the ideality of things generally as an order, a cosmos as distinguished from chaos, if the end of a knowledge of the universe is conceived as a “*Weltordnung*,” then, besides the natural and moral, we find and create an aesthetic “*Weltordnung*”; in the world of reality is manifested the idea of the true; in the moral world the idea of the good; and, finally, in the form which they both take, the idea of the beautiful is manifested. Even in the form of things there will be manifested an order, a law, an ascending completeness, *i.e.*, an idea, and *this idea of form is beauty*.

We will now turn to what appears to us to be by far the most important part of Prof. Lazarus's work—the monograph on “*Mind and Speech*”. It is as a psychological student of language that Lazarus is especially known and valued. Co-editor with Steinthal of the

Zeitschrift für Völkerpsychologie und Sprachwissenschaft, he has been for years an indefatigable worker in the field of linguistic philosophy. By more than one apostle of the mind it has lately been maintained that all future philosophy will be a philosophy of language. Not only do we find the higher order of linguistic students renouncing the purely grammatical and syntactical standpoint for the exploration of the borderland between philology and philosophy, but psychologists themselves are beginning to see that language is not so much the garment as rather the *body* of reason, and that the problems of reason, or the mythology of philosophy, can only be solved by a critique of Language. Indeed, we venture to submit that language has made nearly all our riddles in ethics, psychics and religion, and must therefore be made to solve them. Let us not be misunderstood. It is possible, no doubt, to think in sight and to see in thought: modes of mind can certainly be represented in architecture, sculpture and painting, but no fine art in its richest forms can tell us such a simple fact as: last summer there was a bad harvest. Again, in nature everything is either necessary or contingent, there is no still small voice to whisper: "thou canst, for thou must"! In other words, sequence of time and moral obligation can only be expressed in verbal symbols. And this leads us at once to consider the relation of language to thought, that is, to seek the origin of Reason.

Nothing is perhaps so interesting, so instructive, as the history of speculation concerning the essence and origin of speech. In no department of research have the two logical fallacies of *ignoratio elenchi* and *petitio principii* been more subtly hidden under solutions at once plausible and authoritative. From the time when Democritus and Aristotle asserted that language existed *θέρει*, by human convention, overlooking the fact that this would necessarily involve the capacity of speech in man, and Heraclitus and Epicurus declared it must be *φύσει*, by nature, which would imply a universal language, down to Herder, Adam Smith, Condillac and Heyse, the very thing that had to be explained was taken for granted. The fact of the necessary interdependence of speech and reason, and their alternating evolution, was entirely overlooked. This truth, which was dimly shadowed forth by Descartes and Spinoza, and became more definite in Kant and Schopenhauer, has in our day become so clear that any theory of language which is not founded upon well-ascertained laws of apperception can have little more than an historical value. As Steinthal has well said: "If the origin of language is to be considered as part of the primitive history of mankind, it must be treated as a drama with many acts, extending over long periods. These acts are apperceptions or word-formations. Language is the process by which concepts are formed from percepts."

Lazarus begins his investigation by considering the interaction of body and soul; from this he is led to seek the origin of language, and then to notice the acquisition and development of speech, the influence of language on the mind, and the congruence of thought and speech and mutual understanding.

Now, the lowest form of the soul's life, its first basis, is unquestionably *feeling*, or diffused nervous energy. Given the nerve, in unimpaired connexion with its centre, and we have everywhere in the body this primary consciousness as, what Glogau calls, "the vegetative psychical circulation". The second stage in the evolution of the soul is *sensation*, or localised nervous energy, which is limited to certain afferent nerves. Whilst we experience feelings with almost every part of the body, our sensations only come to us through the five senses—sight, hearing, smell, taste, and touch. These two psychical stages correspond to what Steinthal has well called the *pathognomic* stage in language. That is to say, feelings and sensations have their sound-reflex in *cries* and *interjections*. According to Jäger's scale of the human natural sound, they would embrace the first and second periods :—

I. Period of sensation-sounds and sensation-gesture.

(a) Courting (sexual) call.

(β) Family-call : cry of warning, and the food-call.

(γ) Social call.

II. Period of gesticulation, which consists in this, that the chief "distance-sense," the eye, is no longer satisfied with its own gesture, but calls to aid a synkinetic organ.

Purpose : Understanding about things present.

The third stage in the development of soul is *perception*, or a manifold of present and remembered sensations, by which the picture presented to the mind through the sensory nerves is apprehended. This would give us our second factor in the origination of signs, namely, *onomatopœia*. In Jäger's scheme, the third and fourth periods :—

III. Period of Imitation : air-picture and sound-picture ; the former a continuous development of gesticulation, the latter resulting from the fact that the second "distance-sense," the ear, enlists the service of its synkinetic organ, the voice.

Purpose : Understanding about things absent.

IV. Period in which the air-pictures are supplanted by sound-pictures. The motive is the desire to make oneself understood where an air-picture is not possible, *i.e.*, at some distance, by night, or round the corner.

In music, too, the primitive scale is a reproduction of the sounds of animated nature, so that, at this stage, language and music may be said to be a plastic representation of thought. It is not long, however, before the actual sound painting becomes extended. When a child designates a dog by *bow-wow*, the cow by a *moo-moo*, it understands thereby not only the dog, the cow, as definite species, but all dogs and cows, whether alive or in sculpture and painting, and not only these, but everything that belongs to the dog and cow.

But, language in its real sense, as a vehicle of conceptual thought, first begins with *apperception*, or the fourth stage of the psychical evolution, corresponding to what Lazarus calls the *characterising* stage in language. Whereas the former stages fail to advance beyond the threshold of speech, the apperceptive stage renders possible an almost

endless progress in linguistic structure and variety. Apperception may be defined as the taking up an external perception into the order of like perceptions already present in the mind. Almost every perception is accompanied and supplemented by an apperception; that is to say, to every apprehension from without there comes, to supplement and complete it, according to the law of reproduction, the already existing internal order of co-existence and sequence. Sensation and perception furnish us with the residua of speech, with roots, or the "apperception-stuff," from which by means of apperception, the microcosm is built up. And here we see the connexion of pathognomy with onomatopœia. According to Steinthal's pregnant suggestion, the perceptual reflex was repetition of a syllable; given the root *d'âd'â*! then the sentence *dâ dadâ* would be: *filius fellat*, the suckling sucks. From *d'a-d'a*, *nan-nan* (the first sounds uttered by our own infant) to *ding-dong*, *tik-tik*, and other mimetic sounds, the transition is an easy and natural one. And the tendency of linguistic science is undoubtedly towards a reduction of the number of primary roots; for this reason, that much of what we are accustomed to call original is really derived. What Wilhelm von Humboldt called the "inner speech-form" is, at this fourth stage, the mode of apperception of a new subject through one already present in the soul. Here, too, the name of a thing is given according to its prevailing quality, but the reason for its prevalence no longer lies merely in the strength of the impression, but essentially in its relation to the definite apperceiving idea. Lastly, we must not forget that, in many respects, silence is as important for the evolution of the mind as speech itself. "By talking and keeping silence in society," says Lazarus, "the human soul reached that stage of its activity which we call mind."

¶ With regard to the influence of language on the mind, we have first of all to remember that our psychical life is made up of conscious and unconscious elements. If we think of consciousness as a brightly illuminated space, surrounded on all sides by widely extended darkness, then we may say that all the elements of psychical life must move *seriatim* over this illumined surface, but that, in any given moment, only a short series of elements enjoys the privilege of that illumination, to again disappear in the darkness from which it arose. This fact is what is known as the "narrowness of consciousness". The dim elements, though outside consciousness, are nevertheless co-operative with those within, are, in fact, in a state of *co-vibration*. This fact was overlooked, if not denied, by Herbart, as it did not accord with his doctrine of the soul's unity and its consequences. Now, how is the "narrowness of consciousness" to be overcome? On the one hand, by what is known as the process of *condensation*, and, on the other, by that of *representation*. In "condensation" we cram into the momentary act of thinking the whole subject which is involved in the creation of the present thought; in "representation" the act of thought is entirely cleared of the real substance, a mere image of the same being all that it knows. And representations arise with language, the thought being apperceived through the sound. We then come to

the various kinds of apperception, the identifying, subsumptive, creative and symbolic, which play so important a part in the association-psychology. The evolution of language may be said to be an extension of apperception. So convinced is Steinthal of this fact that, in his *Abriss der Sprachwissenschaft* (MIND XXVII. 453), he devotes 100 pages to its exposition and application.

And here it may be well to note in what, though agreeing with him in the main, Prof. Lazarus differs from his friend and colleague Prof. Steinthal. First, as regards the "narrowness of consciousness". Steinthal contends that there can only be *one idea* in consciousness at the same time. Lazarus, on the other hand, affirms that there is at least a small number present. He thinks that Steinthal does not make sufficient allowance for the energetically co-vibrating elements which really co-operate to make a unity of the act. He also points out that there are but few, if any, ideas which are not compound. The second difference is respecting the psychological nature of representation. Steinthal accepts with Kant that representation is always "an empty reference of consciousness to perception". To this Lazarus replies: No, for in your own example: the body is divisible, the interest rests with the predicate, divisibility, and "divisible" is a representation, here energetic as predicate, and certainly much more definite than "body". Conversely, if body is predicate. Lastly, Steinthal rejects Lazarus's view of self-consciousness which implies repeated thinking, reflected as in a mirror, on the ground that it involves a *regressus in infinitum*. "But," argues Lazarus, "it is a mistake to think that a process must in reality complete or be dependent upon such a regression because potentially or conceptually it may lead to it."

To sum up. Language is the progress from perception to representation, which, as Steinthal has pointed out, is perception of perception. "Manifold apperception of the same phenomenon," says Lazarus, "with the immediate consciousness that it is a manifold of the one subject, and filled with the difference of novelty, of what is striking or important, generally, of what is especially interesting at the moment of speaking, is the origin and foundation of judgment in thought and of the sentence in language." Representation is either of the subject or of the predicate, and perception (*Anschauung*) is the unity of both. The progress of language being from perception to representation, that of science is from representation to *conception*. It is the peculiar character of the linguistic or general national consciousness that its "representations" are complete neither in totality nor in speciality. But conception, which unites in itself the psychological qualities of perception and representation, is directed to complete collation and separation of the elements. Thus, the total effect of language on the mind may be said to be the formation of self-consciousness and the building up of the inner world.

H. M. BAYNES.

VII.—NEW BOOKS.

[These Notes do not exclude, when they are not intentionally preliminary to, Critical Notices later on.]

Ants, Bees, and Wasps: A Record of Observations on the Habits of the Social Hymenoptera. By Sir JOHN LUBBOCK, Bart., M.P., F.R.S., &c. ("International Scientific Series," Vol. XL.) London: Kegan Paul, 1882. Pp. xx., 448; 5 plates.

Animal Intelligence. By GEORGE J. ROMANES, M.A., LL.D., F.R.S., &c. ("International Scientific Series," Vol. XLI.) London: Kegan Paul, 1882. Pp. xiv., 520.

These two works, separated in publication by a short interval, bring animal psychology fairly into line with other departments of science in the series to which they belong. Sir John Lubbock's observations, spread over the last ten years and here collected into a continuous exposition, have become too well known to need any particular description now. They are mainly directed to testing the general mental intelligence and social characteristics, also, in particular (as could be most definitely done), the sense-endowment of ants and the related kinds of bees and wasps. Though the general result of the experiments—which could not have been more intelligently devised and, in the case of ants, more patiently carried through—is to lower the consideration in which the social hymenoptera previously stood for practical ability, there is sufficient evidence left to warrant the placing of them, at least the ants, as high in the scale of mental evolution as perhaps any other class of animals below man. The special interest attaching to ants and the others lies, of course, in their having attained such a pitch of social organisation upon a side-line, off the main trunk-road of evolution; but as it seems clear that their modes and range of sensibility and emotion are comparable with those of other animals up to man, the explanation of their social habits, however exceptionally developed, cannot well be regarded as other than a psychological problem. If, only, there were any means of solving it! Meanwhile, in a subsidiary way, nothing is more wanted than a thorough investigation of the nervous system in the class. Though a mere speck altogether, compared with the nerve-masses of vertebrates, the brain in ants may involve differentiation enough, and indeed must be organised in the most complex way, however their actions be interpreted. Sir J. Lubbock, in his monograph, does not touch this side of the subject.

Mr. Romanes (who also devotes a large amount of space, pp. 31-197, to ants, bees, and wasps, and who does not omit by the way some reference to the neurological conditions in ants) designs his present volume as a foundation for another, to follow within a year or two, on "Mental Evolution," in which he will consider "the facts of

animal life in their relation to the theory of Descent". The present volume gives, in order upwards from the lowest forms of life to monkeys, a critical assortment of the facts, with only such reference to general principles, in an Introduction (pp. 1-17), as is necessary for understanding the psychological point of view from which and language in which they are described. The main outcome of the Introduction is a distinction of Reflex Action, Instinct and Reason, the chief objection to which, as regards the first two terms, is that it is hardly, if at all, observed throughout the later exposition; while there is also some want of clearness, and wavering between pp. 13 and 16, in the view of Instinct as related to individual experience. As regards Reason or "Intelligence," defined (subjectively) as conscious or intentional adaptation of means to ends and distinguished from reflex action and instinct as of "variable and incalculable character," Mr. Romanes is (p. 4) by no means oblivious that the distinction may not be so easy to maintain from the physiological point of view, and as good as promises to grapple with the difficulty (where it has to be faced) in his treatment of the general problem of Evolution. Meanwhile the collection of facts which fills the preliminary volume is presented in a form which, while interesting to the common reader, will also make the book of lasting use to the scientific student. It is a record of animal intelligence so much superior, on the whole, to any that has gone before it in critical discrimination and also, within its compass, in fulness and variety of material, that the author may be heartily thanked for it. It is not so clear, however, that the facts recorded are quite those that will prove most serviceable, or are arranged at each stage in the best manner, for the use he designed to make of them. For one thing, a distinct appreciation at each stage (as far as possible) of the range and variety of sense-endowment would surely have afforded a more definite basis for conclusions as to mental evolution, than is supplied by reports (or rather hypothetical interpretations) of such complex adaptive activities as are set to the account of all animal forms alike from the very lowest upwards. (And speaking of sense-endowment, we miss all record of the remarkable facts bearing upon the disputed question as to the existence of a special 'sense of direction,' referred to at p. 571 above, in the present No.) Sense by itself is not, of course, all that any one means by "Intelligence," but, if it is impossible even in the case of man to discuss intelligence without reference to sense, still less can the two phases of mind be separated in the lower forms of animal life. Again, as regards Intelligence proper, some more express analysis would not have been amiss, in view of such a remark as that at p. 153, where "association by contiguity" seems to be first detected in a particular act of some bees. Are all the marks of complex intelligence noted before in lower animals to be understood as proceeding apart from such mode of mental association? Once more, some continuous reference to the varieties of nervous organisation would hardly have been out of place in the execution of the preliminary part of the author's design; but perhaps this is meant to be afterwards

supplied. Mention should not be omitted of the observations, so admirably made and reported (pp. 484-94) by the author's sister, of the behaviour of a monkey (*Cebus fatuellus*).

Shaftesbury and Hutcheson. By THOMAS FOWLER, M.A., &c., President of Corpus Christi College and Professor of Logic in the University of Oxford. ("English Philosophers.") London: Sampson Low, 1882. Pp. 240.

Shaftesbury and Hutcheson are just such thinkers as can be not inadequately treated in volumes of this size, and the author has here shown that even a single volume may suffice for an effective handling of them both together. Shaftesbury, as he deserves (though he has commonly been made less account of), has the larger space (pp. 167) accorded to him. A very satisfactory biography (40 pp. in length), based upon independent research, is followed by critical reviews of his "Works and Style," "Ethical Theory" (40 pp.), "Theories on Religion, Beauty and Art," "Reception and Influence" of his writings. Hutcheson, whom the author had already dealt with in the *Encyclopædia Britannica*, is treated on a similar plan, in his case the chapter on "Ethical Theory" being followed by one on "Mental Philosophy, Logic, and Aesthetics". It was a right thought to couple the two, and the author works through his subject with a manifest sense of familiarity and ease.

The Life of Immanuel Kant. By J. H. W. STUCKENBERG, D.D., late Professor in Wittenberg College, Ohio. With Portrait. London: Macmillan, 1882. Pp. xiv., 474.

After Mr. W. Wallace's smaller volume noticed in MIND XXVII., the present work (which appears in uniform style with Prof. Max Müllers translation of the *Kritik d. r. V.*) should pretty well satisfy the English appetite for knowledge of Kant and his ways. It is an honest, straightforward piece of work, based on the widest reading of the huge and ever-increasing mass of Kantian literature, and the author, from the fulness of his information, manages to sustain the interest of his subject till the end. The narrative has been filled out to its length with copious references to Kant's surroundings and contemporaries, but there are none of these which the English reader should be other than grateful to have set before him in so interesting a form. While aiming at no systematic exposition of the Critical doctrine, the author has yet been able to include a very fair statement of its development and scope. It is some of the smaller works, both the earlier and the later, of which a more adequate account might have been expected in so lengthy a treatise. (The author, it may be noted, speaks, like Professor Morris in the book noticed below, of the *Prolegomena* as a "popular" rendering of the *Krit. d. r. V.*: so far from that, Kant, whatever his first intention may have been, is forward to explain that it is meant not for learners at all but for teachers.)

Kant's Critique of Pure Reason : A Critical Exposition. By GEORGE S. MORRIS, Ph.D., Professor of Ethics, History of Philosophy and Logic in the University of Michigan, and Lecturer on Philosophy in the Johns Hopkins University, Baltimore. Chicago : Griggs (London : Trübner), 1882. Pp. xvi. 272.

This is the first-published volume of the series of "German Philosophic Classics for English Readers and Students" (hailing from America but not to be written only by Americans) the announcement of which was noticed here some time ago. The author of the present volume, already favourably known as the translator of Ueberweg's *Geschichte der Philosophie*, is editor of the series, and five other volumes by different writers (dealing with works of Kant, Schelling or Hegel) are definitely promised. "Critical exposition of some one masterpiece" is to be the purport of each volume. In the present instance, such exposition, disposed in seven chapters ("The Question Stated," "The Non-Contingent Form of Sense," "The Understanding as a Non-Contingent faculty of Sensible Knowledge," "The 'Transcendental Deduction' of the Categories," "The Principles of Science," "The Limit of Science," "The Futility of 'Metaphysics,'" "Metaphysics as a Science"), is prefaced by a general Introduction, in which the author seeks to establish an opposition between two schools of philosophy as Science of Being founding upon two different conceptions of Knowledge—the one taking Knowledge, falsely, as a purely mechanical process, with Agnosticism and Practical Materialism as its result, the other, truly, as an organic process, which justifies a spiritualistic Science of Being. All modern philosophy before Kant, even the spiritualistic thought of Leibniz, seems to him more or less tainted with the false conception ; most of all English philosophy, and this also after Kant. It was Kant who first began distinctly to clear the way through the "woods of mechanism and formalism," but he was not himself able to emerge into what Prof. Morris (after another) describes as "the green meadows of objective reality" : this was reserved, with the help of other workers, for Hegel. The reader will now understand from what point of view and in what company Prof. Morris performs his task of exposition and criticism. It is performed, as may be supposed, with no lack of insight, and even after all the other expositions of Kant that have been aimed of late at the froward generation that still looks for some philosophical fruit from "English Psychology," it has its justification and will have its use.

The Eight Circulars of Auguste Comte. Translated from the French. London : Trübner, 1882. Pp. 89.

Dr. Congreve says by way of preface :—

"At my request Mr. Lobb undertook the translation of these Circulars. At his death two only were found complete ; the third and fourth wanted finishing. The last four have been translated by others."

La Psychologie de l'Enfant (Les trois premières Années). Par BERNARD PEREZ. Deuxième Edition, entièrement refondue. Paris : Germer Baillière, 1882. Pp. 347.

The author has here cast into a new form, while considerably extending, his essay *Les trois premières Années de l'Enfant*, which was critically noticed in MIND XII. The line of treatment is the same as before; the record of facts has been largely increased, though some of those previously given have been sifted out. From the author's other treatise *L'Éducation dès le Berceau* (MIND XXII.) some pages of psychological observation are now incorporated in the present work, to be replaced in the other by more strictly pædagogical matter.

Études de l'Homme Moral fondées sur les Rapports de ses Facultés avec son Organisation. Par J. P. DESSAIGNES, Chevalier de la Légion d' Honneur, Ancien Professeur de Philosophie et de Physique au Collège de Vendôme, Ancien Directeur du même Collège. 3 Tomes. Paris : Typographie Delalain Frères [1882]. Pp. xxvi. 378 ; 353 ; 403.

This fine piece of French typography, of which only three hundred copies have been thrown off, makes public for the first time a work composed as far back as the years from 1818 to 1828. The author, who died in 1832, in his 70th year, was a member of the congregation of the Oratory and professor of philosophy in the College of Vendôme before the Revolution; retained his professorship when the college was turned into the central school of the department; and, after hearing a year's lectures in Paris, at the new École Normale, from Berthollet, Monge and Lagrange, married and revived in a new form the old college at Vendôme, where he thenceforth remained and reared many distinguished pupils—among them the elder Duke Decazes (to whom the work is dedicated), Balzac and Dufaure. Before devoting himself to the psychological task of his later years, he had won considerable distinction in more than one department of physics, and it was his interest in physiological science that gave the special direction to his elaborate inquiry into the facts of mental life. His three sons, who mention that the long delay in publication has been due to circumstances beyond their control but do not say what these were, issue the work now on the ground of its having not only an historical interest in relation to the state of philosophical thought and scientific inquiry at the time when it was written, but a positive value because of the completeness and originality of its psychological analysis. Nor are they mistaken in their opinion. The analysis is remarkable for the prominence given to Instinct among the original phases of mental life, and generally also for the large part assigned to voluntary activity in the development of intellectual consciousness. Sensations, Instincts, Passions, Habitudes form the main heads of division. Under the last, the author, after considering Habit in general, treats in succession of Memory, Passive Imagination, Active Imagination, Understanding, and finally Language in itself and in relation to thought. The work is, as it professes to be,

throughout a treatise of *physiological* psychology, and it is surprising how very advanced for the time the author's physiology was; but he could already take advantage of Flourens's experiments. While carrying through the physiological interpretation, he is, however, careful to maintain a metaphysical dualism of mind and body; also there is not a little of metaphysic imported, in the fashion of the older psychology, into his theory of sense-perception. On the whole, the book may be regarded as perhaps the highest outcome of the school of Condillac, before the influence of the Scottish and of the German philosophy began to tell. (Reference is made to Reid, but only in an incidental way.) The author, within the limits of the school, works upon the track of Cabanis, in opposition to the introspective method of Destutt de Tracy.

Commentar zu Kant's Kritik der reinen Vernunft. Zum hundertjährigen Jubiläum derselben herausgegeben von Dr. H. VAHINGER, Privatdocenten der Philosophie an der Universität Strassburg. Erster Band, Zweite Hälfte. Stuttgart: Spemann, 1882. Pp. 209-507.

This second part of Vol. I. of Dr. Vaihinger's elaborate *Commentary* (first part noticed in MIND XXIV.), though published two or three months ago, has come too late to hand to be more than mentioned now. It carries the work as far as the end of Kant's "Introduction," and, though the whole body of the *Kritik* remains to be grappled with, the first volume as now completed so fairly represents what must be the character of all the succeeding volumes, however many they may be, that detailed criticism should not (and shall not long) be deferred here. Meanwhile, it may be remarked that the author continues, as he began, to devote the most minute attention to all the non-German, as well as the German, literature that has come under his notice. This is so new a feature in German work of the kind that it deserves warm acknowledgment. And perhaps even more remarkable is the author's disposition to attach weight to the criticisms of men who, while they may have owed much to Kant, can in no sense be described as *Kantianer*. In this view, we are glad to draw attention to Dr. Vaihinger's renewed request that all writers upon Kant would favour him with copies of their productions—whether books, dissertations, programs, articles, or critical reviews (however small)—published or to come. Duplicates of anything he has already in hand he will either make over to the library of the Strassburg Philosophical Seminary or (if desired) return; and everything received will be acknowledged in the prefaces of following volumes. (Address to the University of Strassburg i.e., or through his publisher.)

Geschichte der Ethik in der neueren Philosophie. Von FRIEDRICH JODI, Privatdocenten der Philosophie an der Universität zu München. Band I. (Bis zum Ende des 18 Jahrhunderts; mit einer Einleitung über die antike u. christliche Ethik.) Stuttgart: Cotta, 1882. Pp. xii., 446.

The author in this historical review of ethical thought confines

himself to the two questions which modern philosophers have been mainly concerned to answer—the question of principle, What is morality? and the question of origin, Whence has morality its spring? The whole department of applied ethics (which has been cultivated in modern times chiefly by theologians, following the Scholastic tradition) is left aside; though he has some hopes of taking up its history later, in a spirit suitable to present wants. Within his limits, he seeks to probe the ethical questions to the bottom, in their relation to theology, metaphysic and psychology. Incidental criticism is mixed up with the historic presentation, but the more systematic appreciation of results is reserved for the conclusion of the whole work. In the present volume, bringing the history down to the end of the 18th century, the introductory chapters on Ancient and Scholastic Ethics occupy respectively 36 and 48 pp. After a chapter on the beginnings of Modern Ethics in Bacon and others, a large part of the volume (pp. 108-257) is devoted to the English movement from Hobbes to Adam Smith (including Paley) in four chapters, followed by two (pp. 258-321) on the ethics of Cartesianism and of the French Enlightenment, and two more (pp. 322-68) on Spinoza and Leibniz. The remainder of the volume (pp. 369-446) is composed of references and notes.

Grundzüge der Religionsphilosophie. Dictate aus den Vorlesungen von HERMANN LOTZE. Leipzig: Hirzel, 1882. Pp. 102.

This third issue of Lotze's Lecture-notes (for dictation)—previous issues noted in MIND XXV., XXVII.—gives those on Philosophy of Religion as delivered in the winter-semester of 1878-9. They are disposed by the Editor (Prof. E. Rehnisch) in nine chapters (after an Introduction) entitled—Existence of God, Pluralism and Monism, Nature of the highest Principle, Notion of Creation, Conservation of the World, Government of the World, Actual Course of the World, Religion and Morals, Dogmas and Confessions.

Der menschliche Wille vom Standpunkte der neueren Entwicklungstheorien (des "Darwinismus"). Von G. H. SCHNEIDER. Berlin: Dümmler, 1882. Pp. 498.

In this elaborate treatise, which we purpose reviewing at some length in the next number of MIND, Herr Schneider follows up his work *Der thierische Wille* (MIND XIX.) by applying the doctrine of Evolution to the more complex phenomena of human action. As in the earlier volume, Reflex Action is taken as the type, there being no reference to the possibility of spontaneous movement, that is to say movement the causes of which are to be looked for wholly on the motor side of the nervous system. The idea of reflex action is subjected to a careful reinvestigation with a view to assimilate it on one side to physiological processes lying outside the nervous system, and on the other to conscious and deliberately voluntary actions. Instinctive actions, which are subdivided into Sensuous and Perceptual, have a much wider rôle assigned them in the development of the individual's will than is usually recognised. Consciously purposive actions,

again, are regarded as developing out of instinctive by the gradual subordination of action to remote and general ends. The ultimate end, the representation of which constitutes an action voluntary in the narrowest sense, is Happiness, which looked at objectively is the preservation of the species; the consilience between the objective and subjective ends being brought about by natural selection in the way with which Mr. Herbert Spencer and his English followers have made us familiar. The intricate problems connected with human volition, the relation of the intellectual to the emotional factor in action, freedom, the nature of good, pessimism, all come in for lengthy discussion. There is further a full treatment of the nature and origin of expressive movements. A practical turn is given to the treatise by an attempt to enrich pædagogics with a new theory of moral training. [J. S.]

Anti-Kant oder Elemente der Logik, der Physik und der Ethik. Von Dr. ADOLF BOLLIGER, Privatdocenten der Philosophie an der Universität zu Basel. Erster Band. Basel: Schneider, 1882. Pp. 407.

The author sends the following :

"This work is based on a conviction that the slight consideration shown to German philosophy at home and abroad is owing to Kant and his disciples. The author sets himself to the task of overturning the chief results of the Kantian philosophy in the departments of Logic, Theory of Knowledge, Physics, Psychology, Ethics, and the Philosophy of Religion. An attempt is made to clear the way for an untrammelled development of the more modern way of thinking, and to vindicate for a strictly Empirical Philosophy all the consideration hitherto paid by thinkers to the 'queen of sciences'. Outside Germany this has long been considered as a matter of course, but in Germany itself, owing to the assumption that Empiricism is inseparable from Scepticism—John Stuart Mill's philosophy being held to prove this—the difficulties in the way of Pure Empiricism are much greater. It is sought here to prove that Empiricism, freed from some chronic errors and thoroughly worked out, goes far deeper than has hitherto been supposed, remaining at the same time quite untouched by Scepticism. The greater part of the book, however, is taken up with the author's positive contributions to the treatment of existing problems. The notions of Experience and of Knowledge, of Analytic and of so-called Synthetic Judgment, of Idea and of Concept, of Cause, Substance, Mind, Space, Time,—these are the principal subjects handled in this first volume. In the succeeding volume the other chief topics of the Kantian philosophy will be dealt with. (The book is dedicated to the memory of Darwin and Lotze)."

VIII.—MISCELLANEOUS.

Another untimely death has to be added to the painful record of the year. Professor William Stanley Jevons (as it is most natural to call him, though he retired from all academic duty more than a year ago) was drowned on the 13th of August, while bathing at Galley Hill, near Bexhill, on the Sussex coast. He had not completed his 47th year, being born in September 1835. For years past, his health had been very uncertain, and most probably his death in the water was due to shock. He was born at Liverpool, grandson, on the mother's side, of William Roscoe, of literary fame; his father, Thomas Jevons, was an iron merchant. Educated as a boy at the High School of Liverpool, and at the Mechanics' Institution under the late Dr. W. B. Hodgson, he passed about the age of 16 to University College, London, and there distinguished himself so much in mathematics and chemistry that, in 1854, while still an undergraduate, he had the offer of a place in the Sydney Mint from Dr. Thomas Graham. This he accepted as promising him the means, after a time, of continuing his studies, and so preparing himself for a life of intellectual work. After five years' residence in Australia, he accordingly returned in 1859, and finally completed his course as a student in 1862 by taking the London degree of M.A., with highest distinction, in the branch (as it was then called) of Logic and Moral Philosophy with Political Economy. By this time he had chosen his sphere of work among those subjects, and, beginning at Owens College in the following year as Teacher, he was afterwards, in 1866, appointed Professor over the whole range of them. Ten years later he desired to be freed from the burden of so much lecturing, and moved to the chair of Political Economy in his old College in London; but even the small amount of public duty there required of him proved more than his other work left him strength or inclination for, and he finally withdrew into private life in the winter of 1880-1. Meanwhile, through all the years from 1862, he had been displaying an extraordinary activity and building up an assured reputation as an original thinker and writer in the two departments of Logic and Political Economy. The list of his economic works alone—books, pamphlets, or memoirs—ranging from the most general questions of theory to the most special of practical applications, is remarkable enough for so short a career. When his achievements in logical science are added, he appears as a man of extraordinary fertility and power. His logical work, progressing by the three main stages of *Pure Logic* (1864), *The Substitution of Similars* (1869), and *The Principles of Science* (1874), has been repeatedly considered in this Journal as it will often have to be considered again; there is no need to say more of it now than that it has won him a place of permanent mark in the history of the science. As a man, Jevons was most lovable. Of a shy and

retiring disposition, he never mixed much in general society, but he had a geniality of nature and sweetness of temper, with a ready helpfulness, which secured him an inner circle of most devoted friends. With so firm a grasp as he had of his own convictions and opinions, he was admirable for the spirit in which he courted and welcomed criticism. He has left a widow and three young children to mourn his sad fate.

We have also to record the death, at Hampstead on 6th July, of Dr. William George Ward, in his 71st year. A seceder to the Church of Rome after being deprived of his Master's degree at Oxford in 1845 for his reflections upon Anglicanism in his *Ideal of a Christian Church* (1844), he was later on made Doctor of Divinity by the Pope, and for a time taught philosophy as professor in St. Edmund's College at Ware. Becoming also editor of the *Dublin Review*, he wrote a long series of articles which won him a considerable philosophical reputation. They began some fifteen years or more back (one of the most notable, on "Science, Prayer, Free-Will and Miracles," dating from April 1867) and were not discontinued when he retired from the editorship two or three years ago. More expressly, from 1871, he set himself the task to start from what he called "the very logical commencement and, by a gradual process, to establish securely on argumentative grounds with special reference to the sophisms of modern unbelief the existence of the infinitely Perfect Being whom Christians call God". Modern unbelief, in this country at least, seemed to him to be most seriously represented in the thought of John Stuart Mill, and the argument was generally developed in the form of an attack on Mill's positions. "The Rule and Motive of Certitude" (July 1871), "Mr. Mill's Denial of Necessary Truth" (Oct.), "Mr. Mill on the Foundation of Morality" (Jan. 1872), were followed in course of time by "Mr. Mill on Causation" and by "Mr. Mill's Denial of Free-Will" (April and July 1874), with recapitulatory articles by the way—one of them (July 1873) being a reply to Mill's notices of the second article in the eighth edition of the *Logic* and fourth of the *Hamilton*. After 1874, the argument was carried hardly any farther. Free-will, defended now more particularly against Prof. Bain, was the subject upon which Dr. Ward resumed his polemic in July 1876, and three years later he was still at Free-will, in the *Dublin Review*; the conflict being afterwards transferred, for a little, also to these pages (MIND XVII., XVIII.). The weak state of Dr. Ward's health, which had early interfered with the regular execution of his design, was doubtless the reason why he was never able to fulfil it. In controversy, while always fair and candid, he displayed no ordinary dialectical power; and he was also, in his way, a really acute reasoner. He came, however, out of his scholastic entrenchments, much less near than he thought to the lines of modern advance, and did battle in a manner that struck his friends with admiration more than it confounded those whom he desired to oppose.

We have received from the Rev. Dr. Henry Parkinson, Professor of Philosophy in St. Bernard's Seminary, Solihull, a somewhat lengthy Note on Mr. Davidson's critical notice of Father Pesch's *Institutiones Philosophiæ Naturalis*, &c., in MIND XXVII., contesting the representation there given of the book as well as of the present policy at ecclesiastical headquarters in Rome. The Note is unavoidably left over till another issue.

Mr. George Stanley Hall, who is well-known to the readers of this Journal, has been appointed Professor of Psychology in the Johns Hopkins University, Baltimore. The University which has given this additional proof (after so many others) of comprehending and meeting the scientific wants of the time, and Mr. Hall, who has prepared himself so specially for psychological work, are equally to be congratulated on the appointment.

Dr. Josiah Royce, also no stranger to our readers, is leaving California to take charge of Prof. Wm. James's work at Harvard, during Prof. James's absence this winter in Europe.

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. XVI. No. 1. R. A. Holland—The Philosophy of the Real Presence. H. K. Jones—The Philosophy of Prayer and the "Prayer Gauge". E. Caird—The Problem of Philosophy at the Present Time. Kant—Anthropology (trans.). Hegel—On the Absolute Religion. Hegel—Philosophy of the State. G. Garri-gues—The Hero as Artist. Notes and Discussions, &c.

REVUE PHILOSOPHIQUE.—VII^{me} Année, No. 7. C. Viguier—Le sens de l'orientation et ses organes chez les animaux et chez l'homme. H. Joly—Psychologie des grands hommes (ii.). Th. Ribot—La volonté comme pouvoir d'arrêt et d'adaptation. Analyses et Comptes-rendus (H. C. Bastian, *The Brain as an Organ of Mind*, &c.). Rev. des Périod. No. 8. H. Marion—La philosophie de F. Glisson. J. Delbœuf—Déterminisme et liberté (fin). H. Joly—Psychologie des grands hommes (iii.). Analyses, &c. Notices bibliog. Rev. des Périod. No. 9. Ch. Secrétan—Le droit et le fait. G. Tarde—Les traits communs de la nature et de l'histoire. E. Pan-nier—Le syllogisme et la connaissance. Notes et Discussions (A. Hérault—La mémoire de l'intonation. G. Fonsegrive—Sur le sens équivoque des mots Analyse et Synthèse). Analyses, &c. Notices bibliographiques.

LA CRITIQUE PHILOSOPHIQUE.—XI^{me} Année, Nos. 18-26. L. Menard—Sur l'enseignement primaire (18). A. Comte : Un Opuscule inédit : *Mes Reflexions ; Rapprochements entre le régime de 1793 et celui de 1816*—pp. 14, dated 1816, supposed to be Comte's earliest work (19). C. Renouvier—De quelques opinions récentes sur la conciliation du libre arbitre avec le mécanisme physique (20, 22); Remarques sur une proposition de M. Dauriac relative à la notion de nombre (24); V. Egger, *La parole intérieure* (26). L. Dauriac—De la notion du nombre (21). Sh. Hodgson—Réponse aux notes de M. Renouvier (23, 24, 25). F. Pillon : A propos de la notion de nombre : Réflexions sur les différentes espèces de grandeur (24); Y a-t-il des quantités d'ordre psychique ? (25)

LA FILOSOFIA DELLE SCUOLE ITALIANE.—Vol. XXV. Disp. 2. L. Ferri—Dottrina aristotelica del bene e sue attinenze. T. Mamiani—Della rinomanza degli scrittori in ordine al processo civile. T. Ronconi—Della filosofia baconiana. T. Mamiani—Filosofia giuridica. T. M.—Dei problemi sociali. Bibliografia.

RIVISTA DI FILOSOFIA SCIENTIFICA.—An. I. No. 5. R. Ardigò—La formazione storica del concetto scientifico della "forza". G. Barzellotti—Le condizioni presenti della filosofia e il problema della morale. A. Zorli—Sull' origine di alcuni miti. F. S. De Dominicis—La pedagogia scientifica e la sua funzione sociale. Ferrini e Pogliaghi—La materia radiante secondo le esperienze del Crookes. Rivista Sintetica (G. Cattaneo—I protisti e la protistologia). Riv. Analitica (E. B. Tylor, *Anthropology*, &c.). Riv. Bib. Riv. dei Period.

ZEITSCHRIFT FÜR PHILOSOPHIE, &c.—Bd. LXXXI. Heft 1. J. Kreyenbühl—Die Teleologie als Weltanschauung (ii.). E. Dreher—Ueber das Sittengesetz. J. Volkelt—Wiedererweckung der Kantischen Ethik. G. Frege—Ueber die wissenschaftliche Berechtigung einer Begriffsschrift. A. Krohn—Zur Erinnerung an Hermann Lotze. J. L. A. Koch—Ueber die Seelenvermögen. Rehmke—Physisch oder Psychisch? Recensionen, &c.

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VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE.—Bd. VI. Heft 3. J. v. Kries—Ueber die Messung intensiver Grössen u. über das sogenannte psychophysische Gesetz. E. Laas—Vergeltung u. Zurechnung (Schluss). Schnitz-Dumont—Die Kategorien der Begriffe u. das Congruenzaxiom (iii.). W. Wundt—Logische Streitfragen (i.). Anzeigen. Selbstanzeige, &c.

PHILOSOPHISCHE STUDIEN (Herausg. von Wilhelm Wundt).—Bd. I. Heft 3. W. Wundt—Zur Lehre vom Willen. B. Schmerler—Untersuchungen über den Farbencontrast vermittelt rotirender Scheiben. E. Krapelin—Ueber die Einwirkung einiger medicamentöser Stoffe auf die Dauer einfacher psychischer Vorgänge. W. Wundt—Weitere Bemerkungen über psychische Messung.

Other Books, &c., received: A. Kuenen, *National Religions and Universal Religions*, 'The Hibbert Lectures, 1882,' London (Williams & Norgate), pp. 339. H. Griffith, *Faith: the Life-root of Science, Philosophy, Ethics and Religion*, London (Stock), pp. 171. G. M. Beard, *Psychology of the Salem Witchcraft of 1692*, New York (Putnam), London (Trübner), pp. 112. B. Schoenlank, *Hartley u. Priestley, die Begründer des Associationismus in England*, Inaugural-Dissertation, Halle (Hendel), pp. 58. W. Schuppe, *Das metaphysische Motiv u. die Geschichte der Philosophie im Umriss*, Breslau (Koebner), pp. 37. A. Wernicke, *Die Philosophie als descriptive Wissenschaft*, Braunsch. u. Leipzig (Goeritz u. zu Putlitz), pp. 40; also *Zur Religionsphilosophie* (extract from *Jahrb. f. prot. Theologie*, viii. pp. 193-229). W. Schlötel, *Circular an Gelehrte*, &c., pp. 32. A. Valdarini, *Dottrina dell' Evoluzione e sui principali Conseguenze teoriche e pratiche*, Firenze (Cellini), pp. 70. E. Heriz, *El Metodo Experimental applicado al Estudio del Divorcio*, Barcelona (Ramirez), pp. 19.

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